Administrative Discretion in Disclosure Regulation: Evidence from SEC Confidential Treatment Reviews

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Abstract: This study examines the role of the Securities and Exchange Commission (SEC) in determining the transparency of firm disclosures. Specifically, we use a sample of SEC filings to study how SEC administrative discretion impacts confidential treatment requests of firms to have proprietary information redacted from their filings. Our results show that reviewer fixed effects better explain confidential treatment order decisions than do industry-year fixed effects. In particular, we find that experienced staff are more likely to order redaction amendments, leading to more information being disclosed. We also find that experienced staff spend more time on their reviews and are more likely to reveal material information about a firm. By contrast, we find that staff with prior corporate affiliations are less likely to request redaction amendments. We also find that they spend less time on their reviews and produce redaction denials that result in less proprietary harm for a firm. Overall, our evidence supports the SEC's primary position in executing disclosure regulations as that of protecting information users.

Keywords: Disclosure regulation, SEC reviewers, Confidential treatment, Discretion, Proprietary cost, Investor protection

JEL Classification: M41, M48, H83

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1. Introduction

The Securities and Exchange Commission (SEC) is an independent agency of the United States federal government whose mission is to protect investors while maintaining fairness and order in the markets.[1] A key tenet of this mission is that financial information about a firm should be available so that potential investors can make informed decisions.[2] However, while this transparency is beneficial for future investors, the disclosure of proprietary information is detrimental to current shareholders as this disclosure may adversely affect the company's business and financial conditions (Verrecchia and Weber, 2006; Ali et al., 2014). Given that the SEC is the key regulator of the financial market in the US, it is important to understand how the SEC decides when firms can keep proprietary information private and how it balances the costs and benefits of disclosure to different interested parties in its regulatory process. Our paper explores this question by examining how the SEC exercises administrative discretion in reviewing confidential treatment requests (CTRs) and how this discretion affects what information firms are allowed to keep from disclosing.[3]

In our study, we focus on administrative discretion as it has been shown to be a key determinant in policy outcomes (Meier and Bohte, 2001; Roman, 2017). Administrative discretion, as emphasized in the public administration literature, is fundamental to regulators' decision-

[1] https://www.sec.gov/Article/whatwedo.html
[2] http://www.fasb.org/jsp/FASB/Page/BridgePage&cid=1176166130998&pf=true
[3] Note that our study tests the SEC reviewer's position on CTRs relative to that of the applicant firms. Firms' confidential treatment decisions are driven by the conflicts among stakeholders (see Section 2.3 for details). As a result, from firms' prospective, our findings also shade lights on their position in confidential treatments in relate to that of the SEC.

making processes. Because the law as written is often insufficient in anticipating and interpreting specific circumstances that may arise, public administrators must exercise administrative discretion when determining the outcomes of regulations in specific scenarios (Selden et al., 1999; Sowa and Selden, 2003).

We use confidential treatment reviews as the empirical setting in the study. A confidential treatment order is an SEC-granted non-disclosure of information that otherwise must be disclosed. When a confidential treatment request is granted by the SEC, a firm is allowed to withhold the specified information from the public for a certain period of time. The purpose of confidential treatment regulation is to balance the tradeoff between the investors' right to access firm information and the firm's need to protect against possible disclosure harm.[4] These competing objectives provide us with an empirical setting in which to study: 1) how SEC review staff exercise discretion in weighing the benefits of information accessibility against the proprietary costs of disclosure and 2) what the economic consequences of this administrative discretion are in terms of the amount of information ultimately disclosed to the market.

Our study differs from prior empirical studies on the SEC's decision-making processes. First, prior studies on the SEC's internal processes tend to focus on its Division of Enforcement. As such, these studies focus solely on enforcement cases. In terms of employee incentives, they have examined only the behavior of the trial lawyers related to these enforcement cases (Hayes, 2015). By contrast, our paper examines the administrative staff at the Division of Corporation Finance, which maintains different regulatory objectives than the Division of Enforcement (see Section 2.2 for details). Second, our paper differs from previous studies on the SEC in that confidential treatment reviews are based on ambiguous regulatory objectives and concepts (i.e.,

[4] The confidential treatment review procedures are set out in Rule 406 under the Securities Act of 1933 and Rule 24b-2 under the Securities Exchange Act of 1934.

materiality versus proprietary harm) rather than unidirectional enforcement actions (e.g. Kedia and Rajgopal 2011). Third, confidential treatment requests are generated by the firms themselves, unlike other SEC regulatory actions, such as comment letters, which are initiated by SEC staff (e.g., Dechow et al., 2011; Correia, 2014; Heese et al., 2017).[5] This empirical setting alleviates concerns that our results may reflect SEC staff case selection biases (correlated omitted variables) instead of the actual case review process.

For our theoretical framework, we draw on role theory, a prominent framework in sociology and social psychology, to define administrative discretion. Using role theory, we first define the role of the administrator in a public policy context. Specifically, this theory predicts that the position taken by an individual administrator within the policy-administration continuum is based on how she understands her appropriate behavior and involvement in public policy given her adopted values. In other words, in a public policy setting, administrators make judgments consistent with their beliefs both to influence policy and to advance their own preferences (Biddle, 1979, 1986; Roman, 2017). In such cases, public administrators who see policy formation as part of their role will likely seek opportunities to execute this role in a way that is consistent with their individual demographic backgrounds, i.e., environment and experience (Salancik and Pfeffer, 1978; Warren, 2003). This behavior is termed administrative discretion.

Empirically, we measure administrative discretion based on the experience of the SEC staff. In particular, we expect SEC staff who are more experienced in reviewing confidential treatment requests (CTRs) to better understand the mission of the SEC and the primary objective of confidential treatment regulations. They are thus able to draw on their expertise to collect evidence consistent with their underlying beliefs regarding their role and mission. Within this framework,

[5] Confidential treatment requests are reviewed by randomly-selected SEC staff members, whose identities are unknown to the firm *ex ante* (see section 6.4.3 for details).

we posit that if experienced staff view their role, and the role of the SEC, as protecting information users, they will then make more amendment requests from firms filing CTR requests, leading to more timely and transparent disclosure and to less redacted information. By contrast, we posit that if experienced staff view their role as protecting firms from proprietary harm, they will use their extensive knowledge of materiality and proprietary costs in an opposite direction, and be more likely to grant redaction requests without amendments. Based on the above discussion, whether experienced reviewers order more amendments is an empirical question (please refer to Section 3.2.1 for details).

In addition to SEC experience, we expect reviewers with prior corporate affiliations, e.g., working experience in corporate practice, to better appreciate the costs of proprietary harm from transparent disclosure. Consequently, we posit that SEC staff with prior corporate affiliations will be likely to be "convinced" by the case that a disclosure may lead to proprietary harm and thus more likely to grant approvals for CTRs with fewer amendments. To empirically measure reviewers' prior corporate affiliations, we use the directors' and reviewers' corporate affiliations, including their work experience related to corporate practices.

To test our hypotheses, we use a sample of 4,738 SEC Confidential Treatment Orders (CTOs) with valid information from 2008 to 2015 obtained from EDGAR database. The CTO summaries a firm's confidential treatment request and the SEC's review decision on the redaction request. For each CTO, we collect the firm name; the application information, such as filing forms and exhibit numbers; the name of the SEC reviewer; and the SEC's decision, using Regular Expression in PERL. For each SEC reviewer, we collect demographic information and work experience from various sources, including new employment and departure announcements by the SEC, LinkedIn, Martindale, and Google Search.

In analyzing the discretion of our reviewers, we begin by exploring the economic significance of reviewer characteristics on review outcomes. The results show that reviewer fixed effects have significantly greater explanatory power than industry-year fixed effects, suggesting that reviewer discretion is an important determinant of the review outcome. Moreover, we find that reviewer style inferred from previous CTR reviews provide significant explanatory power over future review decisions, highlighting the persistence of reviewer characteristics on review outcomes.

Next, we examine the effect of reviewer experience on CTR review outcomes, and find that SEC staff with more review experience and higher office rankings are less likely to grant requests without amendments. Conversely, we find that directors and reviewers with prior corporate affiliations are more likely to grant CTRs without amendments. Our findings are robust to a series of specification tests which control for firm fixed effects as well as reviewer incentives such as career concerns and the bonus-to-wage ratio. Our findings are similarly robust when we use a sub-sample of 10-K and 10-Q filings with more homogenous CTOs. Further, to mitigate concern regarding potentially omitted correlated variables in reviewer choice, we re-run our analyses for a small sample where the CTR is reviewed by only one reviewer, ensuring that the match between the reviewer and the review outcome is likely to be exogenous. Our results remain robust.

After documenting the effect of reviewer characteristics on review outcomes, we next examine the mechanism behind this result. First, we perform a cross-sectional test to support our findings on proprietary harm and prior corporate affiliations and find that the effect of prior corporate affiliations on review outcomes is stronger when the potential proprietary harm is greater.

By contrast, we find no change in the effect of reviewer experience on review outcomes when the potential proprietary harm is greater.

In a second test of the mechanism underlying our results, we find that experienced reviewers spend more time reviewing a given CTR, suggesting that experienced reviewers are less easily convinced by the supporting materials that the applicant firm provides and that they devote more time to assessing the information provided to them. By contrast, we find that reviewers with prior corporate affiliations spend less time reviewing a given CTR, suggesting that they are more likely to find the information provided to them sufficiently convincing.

Finally, we test the consequences of the exercise of administrative discretion by SEC reviewers. Here, we find that investors are more likely to request the CTO of a firm when an experienced reviewer has requested an amendment to the original CTR, suggesting the revelation of more material information. In addition, we find that the market reacts more positively to rival firms when an experienced reviewer requests an amendment to the original CTR, suggesting that the amendment reveals proprietary information benefiting industry rivals. Finally, we find that post-amendment disclosures ordered by staff with prior corporate affiliations contain less proprietary information, especially in industries with higher proprietary costs. This finding is consistent with reviewer corporate affiliations leading to a stronger appreciation of the proprietary harm (Gormley, 1979).

Our paper contributes to the literature in two important ways. First, it contributes to the literature on financial disclosure by expanding our understanding of how the SEC's administrative discretion affects corporate disclosures. Specifically, our study examines how the SEC balances its competing objectives of protecting investors' access to information, while protecting firms from proprietary harm. On the one hand, we find that more experienced reviewers are more likely to

serve investors by making material information available. On the other hand, we find that corporate-affiliated reviewers are more likely to favor applicants who wish to avoid proprietary harm. Thus, our paper not only identifies staff administrative discretion as an important factor in regulating accounting disclosures, but also shows *how*, through its discretion, the SEC implements regulations that affect the respective interested parties. In addition, our paper examines the discretion of administrators in the SEC's Division of Corporation Finance, making ours the first paper to examine the decision-making process of the SEC in a non-enforcement context, thus providing useful insights to investors, stakeholders, public administrators, and lawmakers.

Note that our evidence also adds to the understanding of firms' redaction decision. Firms' disclosure choices are driven by multiple factors, e.g. proprietary costs and cost of capitals, and thus is determined by the conflicts among stakeholders (see Section 2.3 for details). However, whether firms' position relative to that of the SEC in CTR is unknown.[6] Our findings indicate that firms take a less transparent position.

Second, our paper contributes to the literature on the economic consequences of disclosure. Our results indicate that the outcomes of CTR reviews affect public information users, but in different ways depending on the direction of administrative discretion. To the best of our knowledge, our paper is the first to examine the economic consequence of SEC staff members' positions on disclosure trade-offs and how this exercise of discretion affects the information environment of the market.

The remainder of this paper is organized as follows. Section 2 discusses the current literature on administrative discretion and reviews extant studies of the SEC and the CTO process.

[6] Prior studies examine CTO redaction are limited and only take the prospective from firms alone. They find confidential treatments withhold proprietary information (Agarwal et al., 2013), and widens the information asymmetry in the market (Verrecchia and Webber, 2006; Boone, Floros, and Johnson, 2016).

Section 3 develops our hypotheses. Section 4 examines our sample and provides our summary statistics. Section 5 presents the empirical research design. Section 6 analyzes our empirical findings. Section 7 addresses the consequences of the SEC's decisions for CTOs. Finally, Section 8 concludes.

2. Literature Review and Background Information

2.1 Administrative Discretion in Regulation Execution

Administrative discretion, or the degree of latitude public administrators can exercise in decision-making or agency activities, is a fundamental issue in public administration literature dating back to the late 19th century (Davis, 1980). Administrative theorists, such as Wilson (1887) and Weber (1978), support the idea that separating administrative implementation from political goals is essential in a democracy. These theorists view public administration as a science that is free from political values and pressures, one whose operations result from rational processes aimed at producing results based on specific predefined criteria (Wilson, 1887). They refer to this separation in the context of the "policy-administration dichotomy," which contends that policy and legislative units (e.g., the U.S. Congress) should concentrate on policymaking, i.e., clarifying values, goals, policy guidelines, and overall control frameworks, while executive units (e.g., civil service) should focus on policy implementation, i.e., keeping the *machine* running (Hood and Jackson, 1991; Egeberg, 1995). In a classical sense, this doctrine views administrators as *neutral* executors of policy. This doctrine also aligns with the concept of "scientific management," which emphasizes the rationalization and standardization of work through the division of labor and the use of statistics (Taylor, 1947; Goodnow, 1900; Urwick and Gulick, 1937).

However, a more recent stream of research has reconceptualized the role of administrators as that of applying a decision process that entails administrative discretion (i.e., Nakamura and Smallwood, 1980; Svara, 1989; Nalbandian, 1991). These theorists propose that unambiguous mechanical implementation of policy is unrealistic, and that administrative discretion is an unavoidable part of policy execution. In other words, legislators cannot anticipate all possible circumstances when they are developing a policy and thus cannot prescribe all of the factors affecting the policy regulation. In short, regulations can never be fully inclusive and therefore require interpretation (Warren, 2003). Although administrators receive procedures to follow, even in the most structured decision context, they must continually decide whether rules should be applied and if so, how those rules should be interpreted (Lipsky, 1980). Our study uses the foundation of administrative discretion theory in the context of the SEC's CTR review, where administrators must make subjective judgments about whether the requested redacted information has proprietary value as well as whether the information is material to investors.

2.2 Literature on SEC Regulatory Actions

Previous studies of the mechanisms underpinning the SEC's regulatory actions focus on the effect of external factors on these actions. For example, these studies examine how firm-specific characteristics impact regulatory decisions such as comment letters and enforcement actions.[7] By contrast, only a few studies have examined the effect of internal factors on SEC enforcement activities. In one of these studies, Kedia and Rajgopal (2011) find that the SEC is

[7] For instance, prior studies have investigated whether large firms and firms with higher portions of qualified opinion are more likely to receive SEC sanctions (Bremser et al., 1991). Other studies have examined the factors affecting the probability of receiving a 10-K comment letter, the extent of the comments, and the cost of remediation (Cassell et al., 2013). Still others have examined firms' political connections as a prediction of their likelihood of receiving comment letters (Correia, 2014; and Heese et al., 2017) and their tendency to avoid tax and comment letters (Kubick et al., 2016).

more likely to investigate aggressive accounting practices in firms that are geographically closer to its offices. They interpret this result as evidence that budget and physical constraints influence SEC enforcement actions, which are adapted accordingly. Our paper extends this research on the influence of SEC internal factors by examining the effect of administrative staff's individual characteristics on the agency's regulatory actions.

In another study of internal factors, deHaan et al. (2015) find that SEC lawyers who subsequently leave to join private law firms that defend clients against the SEC are associated with stronger enforcement efforts, as seen in higher damages collected, a higher likelihood of criminal proceedings, and a higher likelihood of a firm's CEO being charged criminally. Their study suggests that lawyers' career aspirations shape their enforcement actions, supporting the idea that internal agents impact outcomes. However, their study does not extend to non-enforcement cases or employees other than trial lawyers (Hayes, 2015).[8]

Our study fills the gap in current SEC research by expanding the examination of the SEC to the administrative staff of the Division of Corporation Finance. Whereas staff at the Division of Enforcement conduct investigations into possible violations of federal securities laws and litigate the Commission's civil enforcement proceedings in federal courts and in administrative proceedings, staff at the Division of Corporation Finance ensure that investors are provided with material information to be able to make informed investment decisions. As such, rather than punishing misconduct, the Division of Corporate Finance takes a cooperative role with firms, providing them with interpretive assistance with respect to SEC rules and forms.[9] For example, in 2017, the SEC released the FAST Act Modernization and Simplification of Regulation S-K, which

[8] Anecdotally, a conversation with former SEC staff indicated to us that trial lawyers and administrators have very different career incentives.
[9] https://www.sec.gov/divisions/corpfin/cfabout.shtml

proposed to leave decisions about omissions of proprietary information in an SEC filing to the registrant rather than requiring a confidential treatment request.

Second, unlike the Division of Enforcement, the Division of Corporation Finance is not a unilateral rule enforcer, but instead must make a balanced decision between the welfare of the investor and the welfare of the firm. In weighing these competing goals, there is extra room for individual staff members' discretion in their decision making. How SEC staff position themselves between these regulatory goals is thus an open question.

Overall, the tasks and mandates of the SEC's Division of Enforcement and Division of Corporate Finance are fundamentally different, as is their relationship to firms and investors. Thus, evidence generated from prior studies on enforcement actions may not be applicable in our setting.

2.3 Conflicts between Current Shareholders and Other Information Users

The finance literature suggests that current and future shareholders have temporal conflicts of interest (Schwarcz, 2004). For instance, inflated share prices are harmful to future shareholders, but beneficial for current shareholders who can attract external financing at lower costs or sell their shares to future shareholders at inflated prices (Shleifer, 2004). Similarly, Bolton et al. (2006) show that current shareholders are willing to sacrifice long-term fundamental value in order to sell their shares to over-optimistic investors at inflated prices.

This issue of competing goals between current and future shareholders is manifest in our context of CTR reviews. On the one hand, financial information transparency benefits future shareholders by improving their valuation decisions. As SEC chairman Glassman suggests, capital is the engine of the economy and information is the oil that keeps the engine running smoothly.

Indeed, securities law is based on the premise that providing quality information helps potential investors make good decisions to effectively allocate limited resources in the capital market.[10]

On the other hand, the disclosure of a firm's proprietary information can be detrimental to the interests of current shareholders by adversely affecting a company's business and financial condition. While securities laws are meant to make markets more efficient to the benefit of all investors, the reality is that the different needs of different investors mean that when some benefit, it may be a cost to others. The code of law itself does not clearly define which investors are the target of these benefits, nor does it provide any basis for judgments when there are trade-offs in the execution of regulations (SEC Report No. 479 2010). As a result, to maintain a balanced view and be fair to all market participants, those who design and implement policy must consider the implications of disclosure for all stakeholders.

2.4 Background on CTO and Approval Procedures

The Confidential Treatment Order is the outcome of a Confidential Treatment Request made by a firm asking that it be allowed not to disclose otherwise mandated information. The SEC evaluates CTRs on the basis of whether the information is immaterial and whether the disclosure would lead to proprietary harm. If a CTR is granted, a company is allowed to keep the information private for a specified period of time.

Figure 1 depicts the CTR review process. From Figure 1, we see that there are two main areas of discretion in the assessment of applications: "materiality" and "competitive harm." Materiality represents the primary objective of security regulations to protect public access to firm information. As the first step of the review decision, if the redacted information is material to

[10] https://www.sec.gov/news/speech/spch090303cag.htm

investors, the application will be rejected. The second area of discretion is competitive harm. Given that the information has been deemed immaterial, the SEC reviewer next decides if disclosing the information required by the regulation may adversely affect a firm's business and financial conditions as a result of competitive harm. The Freedom of Information Act (FOIA) allows regulators to grant permission for the confidential treatment of information contained in documents that must be filed under the Securities Act and the Exchange Act if the information belongs to one of the exemptions granted under FOIA.

The body responsible for reviewing CTRs is the Division of Corporation Finance (DCF). Within the DCF, the Disclosure Operations Office consists of eleven Assistant Director (AD) offices, each responsible for different industries (detailed in Panel C of Table 2). Each AD office is comprised of 25 to 35 reviewers, most of whom used to be accountants or lawyers.

When a firm files a CTR, the request is sent to the appropriate AD office, which provides either a decision or a comment letter within 28 days of receiving the request. If a comment letter is issued, the firm has 21 days to respond to the letter by amending the request or providing additional supporting information to defend its application.[11] This process may go through several rounds before the final decision, which can be approval, approval with limited or modified redaction (partial approval), or denial. See Appendix I for an example of a review decision (Form "CT ORDER"). If the request is denied or approved with limited or modified redaction, then the firms files an amendment form, e.g. 10-K/A or 10-Q/A, reflecting its response to the SEC comment letter.

3. Hypothesis Development

[11] A company that has received a comment letter can discuss the issue with the SEC staff and request a reconsideration until the issue is resolved.

3.1 Discretion in Review

In this section, we derive the hypotheses for our subsequent analyses. We first examine the impact of administrative discretion on review outcomes. Firms can submit a CTR for the right to conceal information exempted under FOIA (defined by Rules 406 and 24b-2). These rules provide guidance on what information is exempt but with sufficient leeway for reviewers to exercise discretion and for firms to decide how much confidential treatment to request. [12]

In fact, as revealed in the audit report of the Office of Inspector General (SEC Report No. 479, 2010), the assessment of an applicant's argument, including whether the information is: 1) material to investors and 2) causes competitive harm, is subjective and should be based on both qualitative and quantitative factors. One area that is open to interpretation is how the DCF perceives materiality, which depends on how the Division of Corporation Finance understands the term "investors." Such analysis requires significant judgement and can be difficult given that different investors often have different objectives.

Another area open to interpretation is the demonstration of proprietary harm. While it is the applicant's responsibility to establish the commercial or financial harm, many firms do so by providing broad court statements. As a result, reviewers must use their subjective judgment to analyze the disclosure's potential to cause proprietary harm to the specific firm. This judgment thus becomes a key factor driving the review's outcome.

[12] There are a number of requirements that must be met for a firm to granted confidential treatment. Information redacted should not be publicly available elsewhere, such as in press releases, news articles, or disclosures (or intention to disclose) from another party to the agreement. Information required or/and material cannot be granted even if it is confidential — the identity of a 10% customer, the dollar amount of firm backlog orders, interest expenses and other similar terms in a material credit agreement, the duration and effect of all patents, trademarks, licenses, franchises and concessions held, required disclosure in the Management's Discussion and Analysis of Financial Condition and Results of Operations section, which relates, for instance, to loan arrangements and installment payment obligations on debt, and disclosures about related party transactions (SEC, 2001).

3.2 Administrative Discretion, Personal Experience, and Role Theory

In the previous section, we established where discretion can occur in the CTR review process. Here, we examine how administrator characteristics impact their exercise of this discretion. Several factors can affect individual administrators' discretion during the review process. Administrators' values and beliefs can impact whether they act or choose not to act in certain ways, what specific decisions they make, and how they understand their administrative responsibilities in the broader context of the government. As such, their individual values and beliefs serve as filters for interpreting and understanding regulations (Sowa and Selden, 2003), which then become actionable through their exercise of administrative discretion (Salancik and Pfeffer, 1978; Warren, 2003).

To frame our understanding of administrative discretion, we draw on role theory, which suggests that both personal expectations and the perceived expectations of others have a substantial effect on individual behavior (Biddle, 1979, 1986; Roman, 2017). In our context, these expectations are shaped by both on-the-job experience and the larger administrative environment, which in turn are structured by the administrator's background and personal experiences (Weick, 1977; Salancik and Pfeffer, 1978; Warren, 2003). Consistent with role theory, Roman (2017) suggests that public administrators take the initiative to interpret what they believe to be the public interest and to represent that interest in their decisions. Demir et al. (2015) support this assertion and find that individual values are operative in administrators' decisions. These individual values are shaped by a wide array of individual demographic characteristics, including age, gender, race, and education level, which must be considered when studying administrative discretion (e.g., Zhang and Feiock, 2010; Roman, 2017).

In our study, we focus on the demographic characteristic of work experience, which we posit is a crucial factor in administrative discretion. According to the theory of occupational socialization, work experience combines with the work environment to shape administrators' psychological functioning and belief structures (e.g. Kohn and Schooler, 1973, 1982; Nicholson, 1984). For instance, working conditions, organizational culture, and interactions with workers or employers have been found to affect a worker's ideational flexibility, self-directed orientation, and political orientation (Kohn and Schooler, 1982; Kitschelt and Rehm, 2014), all of which are important factors in determining administrative discretion (McCubbins et al., 1987). Other studies have shown that work experience impacts work-related knowledge, skills, attitudes, and emotions (Alkadry, 2003; Tesluk and Jacobs, 1998). Together, these studies suggest that greater experience leads to greater insight which is displayed in administrative discretion (e.g., Schneider and Teske, 1992; Kearney et al., 2000; Zhang and Feiock, 2010; Roman, 2017). In our study, we focus on two elements of work experience: experience with CTRs and experience with corporate practices through prior corporate affiliations.

3.2.1 Reviewer Experience

Our first hypothesis predicts that greater experience with CTRs will lead to a greater likelihood to request amendments when reviewing a CTR. One reason for this prediction is that experience, through repetition, helps reviewers better understand the CTR regulation context. This repetition reinforces the salience of the regulation's purpose, thereby influencing the reviewers' beliefs which, in turn, guide administrative discretion (Weick, 1977; Salancik and Pfeffer, 1978; Biddle, 1979, 1986; Roman, 2017). Hence, if administrators believe the primary motive of the regulation is the promotion of transparent disclosure, then we expect experienced reviewers to be more likely to reduce the number of redactions deemed appropriate. Furthermore, if greater

experience with CTRs leads reviewers to develop greater expertise in their ability to assess both materiality and competitive harm, then we expect reviewers who have completed a large number of reviews from the same industry and AD office to better execute the objective of protecting investors, which, in turn, results in a higher amendment rate.[13] Figure 1 illustrates how review experience may affect CTR review outcomes. This discussion leads to our first hypothesis.

H1: A CTR is more likely to have amendments if the reviewer is more experienced in reviewing confidential treatment requests.

While our theory predicts an increase in CTR amendments with the level of reviewer experience, there are three reasons why this may not be the case. First, it may be that administrators interpret the main function of the SEC as protecting firms against proprietary harm. As such, more experience will allow reviewers to gain a better appreciation of the proprietary harms resulting from disclosure. Similarly, the enhanced ability and expertise reviewers develop through their previous reviews also help the reviewers better execute the objective to protect firms from proprietary harms, comparing to a less experienced reviewer.

Second, it is possible that experience gives reviewers a more precise understanding of the supporting evidence that firms provide in their requests. With this experience, reviewers may then minimize the likelihood that they would err on the side of "over-protecting" investors through a misunderstanding of the evidence.

Third, it is possible that the DCF provides sufficiently clear directions to applicant firms on its regulatory position. In this case, firms will comply with the regulation in their CTRs such

[13] For example, companies in the healthcare industry have biotech and pharmaceutical contracts that contain sensitive information about patents and trade secrets and, therefore, prompt a higher number of confidential treatment requests compared to other industry groups. If a reviewer lacks the level of expertise as an individual assigned to the applicant's industry group due to a lack of familiarity of the subject matter of the confidential treatment request, this may cause some unwarranted confidential treatment requests to be granted.

that both experienced and inexperienced reviewers will show similar ability in interpreting the regulation in specific CTR cases. Ultimately, whether more experienced reviewers order more amendments is an empirical question.

3.2.2 Reviewer Affiliation

In addition to reviewer expertise, we examine whether prior corporate affiliations also impact CTR review outcomes through the exercise of administrative discretion. Previous studies have shown that an individual's occupational experience affects that individual's psychological functioning, which, in turn, impacts his decisions and actions at work (Kohn and Schooler, 1973; Nicholson, 1984). In particular, Gormley (1979) shows that FCC commissioners' prior industry experience increases the likelihood that they will cast votes that are favorable to the regulated industry. Thus, we posit that past experiences in corporate practices and interactions with people affiliated with the corporate world will affect the beliefs of SEC reviewers, which will then influence their administrative decisions. As a result, corporate-affiliated reviewers will be more sensitive to proprietary harm and the costs that firms incur when disclosing information publicly. They will be more likely to be convinced by requests that make the case for competitive harm, we expect that reviewers with prior corporate affiliations will request fewer amendments.[14] This leads to our second hypothesis:

> *H2: A CTR is less likely to have amendments if the reviewer has previous affiliations in the corporate world.*

4. Sample

[14] Arguably, reviewers with prior corporate affiliations may also have a better understanding of corporate practices and thus be better able to detect unjustified exemption requests, which would lead to the opposite outcome.

4.1 Sample Selection

To obtain our sample, we first identify all SEC Confidential Treatment Orders (CTO) from May 1, 2008 to December 31, 2015 from the SEC EDGAR database. Our initial sample consists of 11,507 "CT Orders." From this sample, we use Regular Expression in PERL to extract the details from each CTO, including firm identity, filing and grant dates, form and exhibit type (e.g., 10-K, 10-Q, 8-K, etc.), order decision, and SEC reviewer. We next remove 2,269 CTOs that are an extension of a previous order. Finally, as financial firms have different disclosure requirements, we further remove 693 CTOs issued for financial firms. After the above procedures, we are left with a sample of 8,055 CTOs.

For each of our CTO observations, we next obtain financial information from COMPUSTAT and stock-related data from CRSP. We also gather data from IBES to calculate disclosure timeliness. To compute a firm's competitive environment, we obtain relevant information from SEC 10-K filings. All variables mentioned above are measured in the firm-year prior to the initial CTO filing date.[15] After removing observations with missing variables, our sample includes 5,657 CTOs from 3,787 firms.

After obtaining our firm information, we obtain our reviewer information from the following sources: (1) SEC announcements of new employees and departures; (2) LinkedIn; (3) Martindale; and (4) Google Search. From these sources, we manually collect the gender, age, educational background, and work experience of each reviewer. To ensure data accuracy, we cross-check reviewer characteristics across the different sources. We then delete any firm observations for which any of the above reviewer demographic information is missing. Doing so yields a final sample of 4,738 observations from 3,281 unique firms. Table 1 presents our sample selection

[15] We use the most recent fiscal year before the initial filing date, requiring the end of the fiscal year to be no more than two years before the initial filing date for the CTO.

procedure and the distribution of CTOs across years. Note that the number of CTOs in 2008, the first year when these disclosures are made public, is relatively small; however, the number of CTO applications in subsequent years is relatively stable.

4.2 CTO Descriptive Statistics

In Table 2 Panel A, we provide a breakdown of our CTOs by SEC mandate filing form (e.g., 10-K, 10-Q, or 8-K). On average, we see that each CTO covers 1.6 exhibits. We further see that most CTO applications (80%) are made with respect to financial statements, with approximately 54% of the applications for 10-Qs and 26% for 10-Ks. The time series distribution of the exhibit types is stable over time.

In Table 2 Panel B, we summarize the type of redactions in our test sample. To determine the redaction type, we first merge exhibits in CTO with the firm observations obtained from the SEC EDGAR master file. We then download exhibits based on filing name, exhibit name, and filing date. Using these downloaded exhibits, we apply a Perl algorithm to categorize each exhibit into different types of contracts, based on contract title and content.[16] Following Boone et al. (2016), we categorize contracts into the following categories: agreements related to selling to or purchasing from third parties (*Sale/Purchase*); license or royalty agreements (*License/Royalty*); agreements related to research and development investment, patent, copyright, trademark and consulting (*Research/Consulting*); agreements related to joint ventures, strategic alliances, collaborations, co-marketing, advertising, and consulting (*Peer*); agreements related to borrowing, lending, factoring, and leasing (*Credit/Lease*); agreements related to employees (*Employment*); agreements related to stockholders, such as changes in control rights and stock purchases

[16] Note that a given contract can fall under more than one category.

(*Stockholder*); and agreements related to the settlement of lawsuits, arbitration, and termination of contracts (*Settlement*). Using these categories, we find that around 85% of the contracts in our sample of firms are associated with *Purchase/Sale, License/Royalty,* and *Research/Consulting*. In particular, 59% of our contracts cover at least one *Purchase/Sale*-related redaction, 36% cover at least one *License/Royalty*-related redaction, and 9% cover at least one *Research/Consulting*-related redaction. These results are consistent with the intuition that such agreements are more likely to contain proprietary information.

In Table 2 Panel C, we display the distribution and characteristics of CTR review outcomes over time. From Panel C, we see that, on average, 14.65% of the CTRs in our sample are either rejected outright or receive an amendment request from the SEC. We further see that the amendment rate ranges from 10 to 20%, with the exception of 2008 (4.56%), suggesting that a significant number of applications are amended.[17] Interestingly, this range also indicates a large time series variation in CTR amendment rates, possibly due to political or macroeconomic conditions. Finally, we see that, over our sample period, DCF processing time decreases significantly, from 19.58 weeks in 2008 to 9.90 weeks in 2015.

In Table 2 Panel D, we show the distribution and characteristics of CTO reviews across AD Offices, divided by industry. From Panel D, we see that Healthcare and Insurance (AD Office 1) receives the largest amount of applications, followed by Electronics and Machinery (AD Office 10), consistent with the highly competitive nature of these industries necessitating the protection of proprietary information. Finally, we see that amendment rates also vary across industries, with Natural Resources having the highest value, followed by Beverages, Apparel, and Mining, respectively.

[17] Our main finding is robust if we remove year 2008 from the tests.

In Table 2 Panel E, we present the summary statistics for our reviewer characteristics across AD offices. Our initial sample contains 47 unique SEC reviewers and our final sample consists of 33 SEC reviewers with complete demographic information. The statistics in Panel E show that the number of reviewers varies across AD offices, likely due to the different number and size of firms covered by each office and/or staff turnover. The statistics further show that reviewer characteristics differ across AD offices and employee position. In particular, we find that while directors have 15-20 years of experience in the corporate world, reviewers in general do not have protracted corporate experience. Regarding reviewer gender, we find that the percentage of female reviewers does not vary across offices, with the exception of AD 6 (Manufacturing and Construction) and AD 10 (Electronics and Machinery), where the proportion of female reviewers is significantly lower. Finally, we find that reviewer ages range between 33 and 44 years old.

5. Determinants of Review Outcomes

5.1 Research Design

In this section, we outline our research design and our specifications. We begin by testing the determinants of review outcomes using the following Logit regression equation:

$$Outcome = f(\alpha + B \times Reviewer\_Experience + \Gamma \times Reviewer\_Affiliation + \Pi \times Reviewer\_Controls + \Theta \times Application\_Controls + \Omega \times Firm\_Controls + YrInd\ FE + \varepsilon) \quad (1)$$

To measure outcome, we use *Amend,* a binary variable that equals 1 if the application is rejected or is the recipient of an amendment, and 0 otherwise. Note that *Amend* directly measures

reviewers' decisions about CTR applications, capturing both outright rejections and modified request approvals. Both of these decisions result in improved transparency of information.[18]

5.2 Determinants of Review Outcomes

To test Hypothesis 1, we use three variables to measure review experience. The first two measures capture the reviewers' experience relevant to the application under review. We first define *WithinAD*, a binary variable that equals 1 if the majority of previous CTRs reviewed by the given reviewer are issued from the same AD office, and 0 otherwise. Second, we define *Expert,* a binary variable that measures whether a given reviewer has reviewed the largest number of CTRs within the two-digit SIC industry. Third, we use *Manager*, which is a binary variable that captures whether the reviewer occupies a position higher than office head (e.g., office chief, associate director, and deputy director).[19] We expect reviewers with more management experience to understand the essence of SEC policies better and to have a better ability to review CTRs.

Regarding Hypothesis 2, we measure corporate affiliations using the logarithm of the number of years of work experience related to corporate practices. We measure the corporate affiliations of both reviewers and their supervising directors. While reviewers are the staff who are directly involved in determining CTO outcomes, directors supervise, recruit, and train the review staff as

[18] Our findings are robust after controlling for decisions to file for confidential treatment applications using Heckman's two-stage tests. In particular, in the first stage, we regress a firm's decision to file a CTR in a given year on a set of firm characteristics, as indicated in Table 6. We use the number of Exhibit-10s filed with the SEC during the year as the instrument variable, which is significantly positively related to the firm's decision to file a CTR (coefficient = 0.246, p-value<0.001) but unrelated to the review outcome (Spearman correlation of 0.008, p-value = 0.45). We then calculate the inverse Mill's ratio from the first stage regression and control for this ratio in model (1).

[19] Note that *Expert* differs from *WithinAD* in two ways. First, *Expert* is a direct measure of review-related work experience. It captures the review-related knowledge and attitudes of a reviewer when compared to other reviewers; therefore, *Expert* varies for reviewers from the same AD office. Second, *Expert* is defined based on the two-digit SIC industry, which is a finer measure of industry sector than the AD office.

well as manage daily operations. We thus expect the backgrounds of both reviewers and their directors to affect review outcomes. Assuming that a background with corporate experience leads to a more firm-focused point of view, we expect directors and reviewers with more corporate experience to be more sympathetic to CTR applicants. As mentioned, to obtain information on DCF staff corporate affiliations, we search for personal background information from the U.S. Government Publishing Office, the SEC's public announcements,[20] the *Wall Street Journal*, and the Internet using Google to conduct our online search. For each reviewer and director in our sample, we also manually collect their names, tenure at the SEC, and prior work experience. We use the logarithm of the number of years of work experience related to corporate practices (*Company Practice (Director) and Company Practice (Reviewer),* respectively) as proxies for directors' and reviewers' tendency to favor firms in their CTR decisions.[21]

5.3 Control Variables

To provide greater confidence in our results, we add to our model a number of control variables that may be correlated with our variables of interest and review outcomes. We first control for reviewers' demographic characteristics, including gender (Female), age (Age), and educational background (MBA). We also include a set of characteristics to measure the content of CTR, such as the number of exhibits covered by the application (Num. Exhibits), the redaction horizon (Redact Horizon), and the type of SEC filing form to which the CTR applies.

Next, we incorporate a set of firm characteristics to control for proprietary costs as well as the tendency of a firm to keep information private. To proxy for proprietary costs, we follow Li et al.

[20] The SEC typically provides a brief summary of a director's work experience when announcing a new appointment or departure.
[21] Our results are similar if we use a binary variable capturing whether directors or reviewers have such affiliations.

(2013) and use management's discussion of competition in a firm's 10-K filing *(%Competition*), the firm's R&D expenditures (*R&D*), firm size (*Firm Size*), and *ROA*. Here, we assume that more innovative and profitable firms as well as those that operate in more competitive environments tend to have higher proprietary costs. To measure firms' tendency to keep information private, we use five proxies. *Small Profit* is a binary variable that captures whether a firm reports small positive earnings. *Discretionary Accrual* is the absolute value of discretionary accruals. *Irregularity Restate* is a binary variable that measures the restatement of irregularities in the two years preceding the initial filing date. *Big 4* is a binary variable capturing whether the firm is audited by a "Big Four" audit firm. *High Timeliness* is the timeliness of disclosures, based on analyst forecasts (Donelson et al., 2012). Finally, we also control for financing needs (*ExFinancing*) and institutional ownership (*Institutional Ownership*) to account for outsiders' demand for information and firms' incentives to conceal bad news to boost share price. Appendix II details the variable definitions. To account for any omitted correlated variables across industries and years, we control for year*industry fixed effects throughout our tests. We cluster the standard error at the firm level.

6. Empirical Findings

6.1 Summary Statistics

Table 3 displays the summary statistics for our main variables. From Table 3, we see that our reviewer characteristics are consistent with those reported in Table 2. In terms of reviewer characteristics, about 60% of applications are reviewed by an SEC staff member with related industry review experience, 50% are reviewed by females, and only 2% by directors. Of the reviewers, 13% have an MBA education and on average are 40 years old ($e^{3.68}$). On average, we see that directors have 15 years ($e^{2.75}$) of prior work experience related to corporate practices, while SEC staff have only 2 years ($e^{0.85}$). The remainder of the panel also reports firm characteristics.

Here, we see that the average size of our sample firm is 305 million dollars, the ROA is -13.9%, and the average institutional holdings is 42%. These statistics are generally consistent with sample firm characteristics observed in prior studies (e.g., Li (2013)).

Table 4 presents the correlation matrix between the main variables. The results in Table 4 show univariate evidence that the likelihood of requesting an amendment varies with reviewer characteristics. For example, we find that reviewers who are not specialized in the AD office covering the applicant firm are more likely to grant CTRs, while reviewers with greater experience are more likely to reject them. Moreover, we find that directors and reviewers experienced in corporate practices are more likely to grant CTRs, consistent with the argument that prior corporate affiliations affect administrative judgments in favor of the applicant firm.

Examining our statistics further, we find that the amendment rate (*Amend)* is negatively correlated with the variables that capture proprietary costs for the CTRs in our sample. Specifically, *Amend* is lower when the intensity of the firm managers' references to competition (*%Competition*) and R&D expenditures (*R&D*) is higher. This is consistent with firms being less willing to disclose information when they have higher proprietary cost concerns. We further find that *Amend* is higher when applicant firms have higher discretionary accruals, are not audited by a Big 4 auditor, or have a lower proportion of institutional ownership. This suggests that the SEC review outcome may also be related to the quality of a firm's accruals and corporate governance. Finally, we find that *Amend* is higher for firms with more external financing. These results collectively support the claim that the SEC balances the public interest of promoting disclosure to investors with firms' incentives to protect proprietary information.

6.2 Significance of Reviewer Fixed Effects/Style

Before exploring the effects of reviewer experience on review outcomes, we first examine the economic significance of reviewer fixed effects. We do so to validate the importance of reviewer characteristics in determining review outcomes. In Table 5 Panel A, we compare the results of reviewer fixed effects and industry-year fixed effects. To obtain a meaningful comparison, we use a cohort of industry-years that have more than two observations. From the results in column (2), we see that the McFadden's adjusted R-square for reviewer (industry-year) fixed effects is 4.8% (2.1%), suggesting that reviewer fixed effects have significantly larger explanatory power. This finding is reinforced by the results from our Akaike-adjusted Vuong test. Moreover, the AIC in the model using only reviewer fixed effects is smaller (3673.01) than that of the model using industry-year fixed effects (3841.38). In column (3), we present the results from our analyses after including reviewer fixed effects; the McFadden's adjusted R-square increases from 2.1% to 2.9% and the AIC decreases from 3841.38 to 3812.81.

In Panel B of Table 5 Panel B we present our results examining whether the effect of the above reviewer characteristics on review decisions persists over time. If so, then their fixed effects on requesting amendments and making final decisions on CTRs should also predict their assessment outcomes in subsequent periods. To empirically test this conjecture, following Bertrand and Schoar (2003), we divide the sample into two periods, the first from 2008 to 2011 and the second from 2012 to 2015. We first estimate each period's reviewer fixed effects using the sample period from 2008 to 2011. We then examine the relationship between a reviewer's estimated fixed effect and her review outcomes after 2012. As predicted, we find that the reviewer fixed effect inferred from the earlier period is significantly and positively associated with reviewer decisions in the later sample period. Overall, our results from this set of analyses suggest that reviewer characteristics have significant incremental explanatory power for review outcomes.

6.3 Determinants of Review Outcomes

In this section, we present the results from our analysis of the determinants of review outcomes. From the results in Table 6 column (1), we find that including reviewer experience and affiliations in our model yields a positive correlation between the amendment rate and within-AD-office reviewers *(WithinAD)*, industry experts *(Expert)*, and high-ranking reviewers *(Manager)*, significant at the less than 1% level (t-statistics range from 2.76 to 3.12). This finding supports H1 by indicating that reviewers with experience relevant to the confidential treatment reviews are better at identifying unwarranted confidential treatment requests and more likely to request amendments. Examining the results in column (1) further, we find that the amendment rate is significantly negatively associated with directors' and reviewers' previous corporate affiliations (t-statistics of -1.94 and -2.58, respectively). This finding supports H2 by indicating that reviewers with prior corporate affiliations are more favorable to applicant firms.

In column (2) of Table 6, we report the results of the effects of CTR and firm characteristics on review outcomes. Regarding the CTR, we see that the amendment rate is higher when the CTR includes more exhibits or requests a longer redaction period. This is consistent with the prediction that CTRs with more redacted information tend to have higher amendment rates. Moreover, we see that the amendment rate is negatively associated with *Firm Size* (t-statistic of -3.38) as well as financial reporting quality. One possible explanation for this latter finding is that the determinants of financial reporting quality are also related to disclosure decisions (Lennox and Park, 2006). Finally, we find that reviewers request amendments more frequently when firms have greater financing needs (*ExFinancing*, t-statistic of 2.28), possibly due to external pressure for disclosed information when issuing equity or debt. Finally, from the results in column (3), we see that

combining reviewer experience with CTR and firm characteristics yields similar findings. Together, the results in Table 6 support the prediction that the administrative discretion of the SEC review staff influences how reviewers balance the competing regulatory objectives of promoting disclosure transparency and protecting proprietary information.

6.4 Additional Analyses

6.4.1 The Role of Proprietary Costs

In this section, we further explore our assumption that reviewers with prior corporate affiliations better understand the importance of protecting proprietary information and better appreciate the evidence that firms provide. To shed light on this economic mechanism, we test the conjecture that the relationship between *Company Practice* and *Amend* will be more pronounced if the applicant firm has greater justification for its proprietary harm concerns.

To measure justified proprietary harm concern, we use the intensity of R&D investment and industry concentration as proxies for disclosure proprietary harm. Specifically, we define *HighRD* as a binary variable that equals 1 if the average R&D investment intensity (the ratio of R&D expenditure to total assets) of the two-digit SIC industry is higher than the sample median, and 0 otherwise. In addition, we define *LowHHI* as a binary variable that equals 1 if the Herfindahl-Hirschman Index of the two-digit SIC industry is lower than the sample median, and 0 otherwise. *HighRD* and *LowHHI* are expected to be associated with higher proprietary costs of disclosure (Li, 2010). To test for the effect of justified proprietary harm concerns, we include the interaction term of *HighRD* or *LowHHI* and *Corporate Practice (Director)* or *Corporate Practice (Reviewer)* in Model (1).

The results are reported in Table 7 columns (1) and (2). As predicted, we find that the interactions between our proprietary harm and corporate affiliation measures are all negative and significant, indicating that the relationship between reviewer corporate affiliations and the amendment rate is stronger for firms with higher proprietary costs. As placebo tests (un-tabulated), we also include the interaction between reviewer work experience and proprietary harm. We find that the results for all interaction terms with reviewer experience and proprietary harm are insignificant, with the exception of *LowHHI*WithinAD* (t-statistics = -2.12).

To address the concern that the inference of the coefficient of the interaction term may be biased in a non-linear regression, we follow Norton et al. (2004) and plot the Z-statistics of the interaction effects across observations with different predicted amendment rates in Figure 2. From Figure 2, we see that the interaction effects are almost always negative, while the Z-statistics vary. Specifically, we see that the interaction effects are significantly negative when the predicted amendment rate ranges from 30% to 60%, reinforcing the idea that the effects of administrative discretion and transparency/disclosure tradeoffs are strongest in this range. Overall, our findings support the notion that reviewers with prior corporate affiliations are more likely to render favorable decisions for firms with higher proprietary costs.

6.4.2 Robustness Checks

We conduct a series of robustness checks to mitigate concerns about potential omitted correlated variables associated with reviewer characteristics. First, we replicate our main tests controlling for time-invariant unobservable firm characteristics. For example, Kedia and Rajgopal (2011) find that firms located closer to SEC offices are more likely to be investigated by the agency. We thus control for firm fixed effects to eliminate any effect pertaining to firm-specific time-

invariant factors. We present our results in columns (1) to (3) of Table 8. These findings show that experienced reviewers are more likely to recognize unwarranted CTOs, while reviewers with previous corporate affiliations are more likely to grant CTOs without amendments.

In our second robustness test, we re-run our analyses on a subsample of CTOs associated with only 10-Q or 10-K filings. By limiting our sample to only these filings, we eliminate the possibility that our results reflect firm incentives to conceal material information during important events such as new equity issuances or mergers and acquisitions. The results with this new sample, presented in columns (4) to (6) of Table 8, are similar to those of our main analyses.

In our final robustness test, we re-run our analyses controlling for reviewer incentives. First, following deHann et al. (2015), we control for reviewer implicit incentives related to career concerns, such as internal promotions and revolving door concerns. Specifically, we control for reviewer tenure, calculated as the number of years that a reviewer has worked at the SEC; an internal promotion indicator for whether the reviewer received an internal promotion the following year; and a revolving door indicator for whether the reviewer works in the private sector after leaving the SEC. Second, we control for reviewer explicit incentives as measured by the bonus-to-wage ratio. Because of the requirement of additional variables, our sample size is reduced to 3,452 observations. After controlling for implicit and explicit incentives, we find that our results (un-tabulated) continue to hold, suggesting that experience and corporate affiliations affect administrative discretions through channels other than career concerns and monetary incentives.

6.4.3 Review Assignments

In this section, we examine whether the SEC assigns applications to different review staff based on reviewer characteristics, e.g., assigning more complicated cases to staff with more

experience. If the SEC matches more experienced reviewers with certain cases in a manner consistent with its interpretation of its mission, then it would be unlikely for any correlated omitted variables to have influenced the results.

To investigate whether there are correlated omitted variables, we run a series of additional tests. We first focus on a small sample in which the allocation of confidential treatment requests is likely to be exogenous. Specifically, if there is only one SEC staff member responsible for CTR reviews in the applicant's corresponding AD office when a confidential treatment request is submitted, then the match between the request and an SEC staff member is likely to be exogenous. To obtain our sample, we start with the entire CTO database from 2008 to 2015. For each AD office in each month, we compute the number of SEC staff members at the AD office who received confidential treatment applications (based on the initial filing date indicated in the CTO) in that month. From this sample, we exclude any AD office-month cohorts with more than one SEC staff. We further eliminate AD office-month cohorts with less than two requests.[22] This process yields a final sample of 1,309 observations. Using this testing sample, we repeat our main analyses, dropping *Manager* from the specification as it has no variation in the small sample. The results, in Table 9, are consistent with our previous findings. For additional assurance, we test the determinants of the reviewers by regressing reviewer characteristics on firm and CTR characteristics. The results here (un-tabulated) show no consistent pattern across the regressions, supporting the assertion that the SEC does not systematically assign specific reviewers to certain cases.[23]

[22] According to our identification strategy, an AD office-month cohort is mechanically defined as consisting of only one SEC staff member responsible for CTR reviews if there is only one confidential treatment request.

[23] In particular, we do not find a uniform pattern that measures capturing proprietary costs are consistently positively or negatively associated with reviewers' review experience or their affiliations with corporate practice. Nor do we find that the sign of coefficients of measures capturing managers' incentives to conceal information are consistently positive or negative.

In addition to examining the potential correlated variable of case assignments, we conduct three additional tests to study the distribution of firm-reviewer matching. In the first test, we examine the randomness of the actual case allocation by testing the null hypothesis that firm-reviewer matching follows a uniform distribution, assuming that each reviewer has the same likelihood of reviewing a case if the matching is random. For each AD office, we compute the expected frequency of matching between an applicant firm and each reviewer in the AD office using the number of CTRs that the firm submits divided by the total number of reviewers in the AD office. We then compare the actual frequency of each firm-reviewer matching to the expected frequency. Our results from testing for uniform distribution in matching show that the null hypothesis cannot be rejected at conventional levels (p-values range from 0.138 to 0.995 across AD offices).

In the next test, we test whether firm-reviewer matching is endogenous by examining a sample of firms that submit more than one CTR in a given year and have different reviewers for each request. If firm-reviewer matching is endogenous such that cases filed by firms with specific characteristics (e.g., more incentives to withhold material information) are more likely to be allocated to certain types of reviewers (e.g., experienced reviewers), then we would expect to find positive correlations among the characteristics across reviewers who reviewed applications from the same firm. However, our results from this test show that a given reviewer's characteristics are either negatively or insignificantly related to the characteristics of other reviewers who reviewed the same firm. Similarly, we fail to find significantly positive correlations among the characteristics of different firms reviewed by the same reviewer. We take the results from this set of analyses as further support for the assumption that the SEC assigns cases randomly.

6.4.4 Review Durations

In this section, we run additional tests using an alternative measure of reviewer skepticism about the arguments made in a CTR. In particular, we examine the possibility that skeptical reviewers may conduct extensive search for evidence to support a request for an amendment. In this case, we use review duration, the time that reviewers spend to investigate and collect evidence from the applicant firms, as an alternative indicator of the reviewers' skepticism about applications. A longer duration suggests more skepticism and more effort expended on the review.[24] To measure review duration, we define *#Week*, an ordinal variable equal to the number of days from the initial filing date of the original filing form to the CTO date, divided by seven and rounded to the nearest integer to capture the time that an SEC staff member spends to conclude a confidential treatment request case.

We first test the correlation between *Amend* and *#Week*. Our results show that these two variables are significantly and positively correlated at 44%, suggesting that reviewers spend more time and effort collecting evidence to assess the merit of the application and to request amendments. If reviewers have a strong sense of protecting investors, we expect they would be more likely to devote time looking for evidence to ensure that investor interests are protected.[25] By contrast, if reviewers are favorable to firms, we expect they would spend less time looking for additional information.

[24] Firms must respond to comment letters within 21 days. If a firm takes longer to respond to the comment letter, this may be regarded as an indication of their difficulty in resolving the reviewer's concern, which is consistent with reviewers being more likely to lean toward disclosure transparency. However, if firms delay their responses due to operating decisions or policies, then this may add noise to the test and bias against finding the result.

[25] Note that whether a less experienced reviewer takes longer to review the application is an open question. A less experienced reviewer may simply pass on the application, which shortens the review time. Conversely, he or she may spend more time collecting and analyzing evidence because of his or her inability to carry out the investigation and conclude the case efficiently.

To mitigate the effect of the administrative process reform that has significantly shortened the review duration, we exclude confidential treatment requests initiated in or before 2008 from our analysis here. In Table 10, we present the results using our alternative measure of reviewer skepticism. We estimate the model using negative binomial regression in columns (1) and (3) and using OLS in column (2). Columns (1) and (2) report the results based on all CTOs with an initial filing date after 2008, while Column (3) displays the results after excluding CTOs associated with form-types other than 10-K and 10-Q. Finally, we control for industry*year fixed effects in columns (1) and (3), and for firm and industry*year fixed effects in column (2). From Table 10, we see that experienced reviewers consistently spend significantly more time on reviews, implying that they are more skeptical about confidential treatment requests. By contrast, the results show that reviewers with prior corporate affiliations consistently spend significantly less time on their reviews, reinforcing our earlier finding that these reviewers are more sympathetic to firms.

In sum, our tests of potential correlated omitted variables yield consistent and robust evidence that experience and judgment drive our review outcome results. Experienced reviewers are more likely to amend confidential treatment requests, while reviewers with prior corporate affiliations are less likely to amend such requests.

7. Consequence of SEC Decisions

7.1 Amendments and Information Materiality

In our final set of analyses, we examine the economic consequences of reviewers' decisions. Here, we first examine whether the redacted information is important to investors. Specifically, we expect that amendments will yield greater benefit to investors if they reveal information that is

more material. In contrast, we expect that fully granted CTRs that do not redact material information will have no impact on investors.

To measure the materiality of revealed information, we use investors' requests for CTO forms in EDGAR. CTO forms detail the amendments requested as well as the redactions granted. A higher number of investor requests for CTO forms would suggest that investors have stronger concerns about the information redacted, indicating greater materiality. As discussed earlier, if experienced reviewers can better identify unwarranted CTRs, then the re-filed exhibits—with the initially redacted information now revealed—will provide more material information to investors, which in turn will trigger intensive information acquisition activities. Note that we focus on the CTO form requests rather than financial statements to test the differential effect between amended and fully granted decisions, as there is no need to request financial statements if the redaction is fully granted.

As mentioned, a fully granted CTR implies that the reviewer has judged the redaction to contain no material information. As experienced reviewers can better identify materiality and protect investors from opacity, a confidential treatment request approved by an experienced reviewer is less likely to contain important information and thus less likely to prompt investor information acquisition activity.

To test for information acquisition activity, we obtain the compressed EDGAR Serve Log data from the Notre Dame Software Repository for Accounting and Finance (http://sraf.nd.edu/data/edgar-server-log/), which tabulates the CIK, the access name of SEC form filings, and the corresponding non-robot EDGAR requests submitted each day, using Loughran and McDonald's (2017) definition of robot requests. For each CTO, we compute the total non-robot requests for the applicant firms' CTO forms on both the filing date and the day after the

filing date. Our conjecture is that a greater number of CTO form requests indicates greater investor interest in acquiring firm information (Drake et al., 2015).

The main variable in our model is *CTO_View,* which is defined as the ratio of the number of EDGAR requests for CTO forms on the day of (after) the CTO filing date (day [0, +1]) to the number of EDGAR requests for all forms during the one-month period ending five days before the CTO filing date. To control for the *normal* level of EDGAR requests, we scale the number of EDGAR requests for CTO forms by the number of EDGAR requests for all forms.[26] We then divide our sample into CTOs with amendment requests (*Amend=1*) and CTOs without amendment requests (*Amend=0).* Conditional on CTOs having been approved without amendments (*Amend=0*), we predict that *CTO_View* will be negatively associated with reviewer expertise, as the redacted information is less likely to be significant for investors. Conversely, conditional on amended CTOs (*Amend=1*), we predict that *CTO_View* will be positively associated with reviewer experience.

To test the aggregated effect of reviewer characteristics across sub-samples and to overcome the small number of amendment orders in our sample, we construct a comprehensive measure of reviewer experience. In particular, we define *Experienced* as a binary variable that equals 1 if the reviewer is from the applicant firm's AD office and is either an industry expert or a manager, as defined in the previous section, and 0 otherwise.[27] In our regression, we control for

[26] To alleviate concerns that our conclusions are driven by the denominator, our findings (un-tabulated) are robust if we use the logarithm of the number of EDGAR requests for CTO forms as the dependent variable and control for the logarithm of the number of EDGAR requests for all forms in the month prior to the CTO filing date.

[27] In the amendment sample, when we decompose *Experienced* into *WithinAD*, *Expert*, and *Manager*, we find that our results are all positive and significant at the 10%, 10%, and 5% levels, respectively. However, in the granted sample without amendments, *WithinAD* is negative and significant at the 5% level, and the p-values of *Expert* and *Manager* are 0.84 and 0.27, respectively. Furthermore, we find that the differences in the coefficients of *WithinAD, Expert,* and *Manager* in the amendment sample and the granted sample without amendments are all significantly different from 0 (Chi-squared statistic of 7.30, 4.62, and 5.36, respectively). The joint test of the difference of *WithinAD, Expert,* and *Manager* is significantly different from 0 at the 1% level (Chi-squared statistic of 12.68).

CTO characteristics, the number of CTOs in the month, and industry*year fixed effects. We also incorporate month and day-of-the-week fixed effects to control for time-variant market sentiment. Table 11 presents the results of our analyses. The results in columns (1) and (2), respectively, are based on amended and unamended CTOs. Consistent with our prediction, we find that when CTOs are amended, *Experienced* is positively associated with EDGAR requests for CTO forms around the CTO filing date (t-statistic of 3.05), suggesting that the consequence of an amendment is to provide material information to investors. In contrast, when CTOs are granted without amendments, we find that *Experienced* is negatively associated with EDGAR requests for CTO forms around the CTO filing date (t-statistic of -1.72), suggesting that the redacted information is less important to investors. The difference is significant at the 1% level. These results collectively support our argument that experienced reviewers can better identify unjustified confidential treatment requests.

7.2 Proprietary Harm and Market Reaction to Industry Rivals

In a second test of the economic consequences of CTR outcomes, we examine the proprietary costs that firms incur due to their failure to successfully redact information from their financial disclosures. If proprietary information reveals a firm's competitive advantage, the disclosure of this information would benefit industry rivals.[28] Market recognition of this benefit would be manifested as a positive reaction to rival firms when a firm's proprietary information is disclosed.

As stated earlier, reviewers with prior affiliations in the corporate world are sympathetic to the competitive harm of disclosure and therefore less likely to request amendments. Conditional

[28] We first confirm that the previously redacted information disclosed in the re-filed exhibits conveys proprietary costs. The cumulative abnormal return (CAR) of all industry rivals is 0.03% and is statistically indifferent from 0. The CAR of industry rivals producing similar products (defined according to the pairwise product similarity score (Hoberg and Phillips, 2016) between industry rivals and the CTO applicant firm) is 0.06%, statistically different from 0.

on amendments, amended CTOs by such reviewers are likely to contain less proprietary information and therefore less likely to elicit a positive market reaction to industry rivals. We expect this relationship to be more pronounced in industries with higher proprietary costs.

To test for market reactions to disclosed proprietary information, we conduct our test around the disclosure date of the redacted information. Whenever a CTO is amended or rejected, the SEC requires firms to re-file the same exhibits with the redacted information included. To obtain our sample, we identify 693 amended CTOs. From each CTO, we manually obtain the exhibit re-filing dates. If the re-filing date is not explicitly stated in the CTO (281 cases), we search all amendment form filings in EDGAR and set the re-filing date as the filing date of the amended form, which shows re-filed exhibits with the previously redacted information revealed. Using this process, we obtain the re-filing date for 639 amended CTOs. We next define each applicant firm's industry peers or rivals based on the pairwise product similarity database in Hoberg and Phillips (2016). This database tabulates the product similarity for every firm-pair in the same three-digit SIC industry above a certain threshold. After identifying each firm's industry rivals, we examine the market reaction to these industry rivals around the firm's re-filing date of the same exhibits. We calculate the market reaction using the market model with an estimation window of 252 days, ending 60 days before the re-filing date, with a minimum of 60 observations for the estimation window.[29] Since some exhibits are filed after trading hours, we focus on the cumulative return on both the re-filing day and the day after.

If reviewers with corporate affiliations favor firms, we predict that *Rival CAR [0, 1]* should be negatively associated with reviewers' corporate affiliations, especially in industries with higher proprietary costs. To test this conjecture, we define *ComPractice* as an aggregated binary variable

[29] These results hold when using alternative estimation models, such as market-adjusted returns, FF 3-factor modeling, and 4-factor modeling.

that equals 1 if either the *Company Practice (Director)* or the *Company Practice (Reviewer)* is higher than its corresponding sample median, and 0 otherwise. We regress *Rival CAR [0, 1]* on *ComPractice*, controlling for CTO characteristics, form-type fixed effects, and industry*year fixed effects.[30]. As the event is at the industry level, we cluster the standard errors at the industry level.

We present the results in Table 12.[31] In columns (1) and (2), we divide competitor firms into *High Similarity* and *Low Similarity*, based on the sample median of pairwise product similarity scores. Competitors with a similarity score higher than the sample median are classified into the *High Similarity* group and vice-versa. In columns (3) and (4) and columns (5) and (6) further divide the sample based on the industry R&D intensity and industry HHI, respectively. Overall, our results show that *ComPractice* is negatively associated with *Rival CAR [0, 1]* when proprietary costs are higher, i.e., where there is a higher product similarity, higher R&D intensity, and lower industry HHI. By contrast, we find no signification association between *ComPractice* and *Rival CAR [0, 1]* when proprietary costs are lower. The difference between the coefficients of *ComPractice* is significant at the conventional level (except for the proxy for *High Similarity*). Overall, the results in Table 12 support our assertion that reviewers previously affiliated with the corporate world better understand competitive harm and are thus more likely to make decisions in favor of applicant firms.[32]

[30] *Company Practice (Director)* is negative and significantly different from 0 in the high-proprietary-cost sample (columns (1), (3), and (5)). *Company Practice (Reviewer)* is omitted automatically in columns (3) and (5) due to little variation in the small sample. It is significant at the 1% level in column (1) (t-statistic is -3.40), and is insignificant in column (2) (t-statistic = -1.06). The difference between columns (1) and (2) is significant at the 5% level (Chi-squared statistic of 4.87).

[31] Our results are not affected if we focus on rivals producing similar products based on the industry R&D intensity and industry HHI, respectively.

[32] As placebo tests, we study the effect of affiliations on EDGAR requests for CTOs and the effect of *Experienced* on peer *CAR*. We do not find a significant difference between the sub-samples in either test. As an extension, we also test the market reaction to the filing firm. Our results (un-tabulated) show that CTR amendments requested by experienced reviewers lead to more significant negative market reactions than those requested by other reviewers, when there are high proprietary costs.

8. Conclusion

In our paper, we examine how the SEC views its primary mission as evidenced by its exercise of administrative discretion when reviewing confidential treatment requests. When considering confidential treatment requests, SEC review staff are faced with the tradeoff between the investor need for transparent disclosure of information and the firm need to protect proprietary information. Our paper tests whether and how SEC staff members' administrative discretion affects their review decisions in balancing this trade-off. The results of our analyses first show that the explanatory power of reviewer fixed effects in the CTR review is significantly higher than the explanatory power of industry-year fixed effects, suggesting the importance of SEC administrative discretion in shaping the information environment in the capital market.

Our results further show that experienced review staff are more likely to spend more time on their reviews and more likely to request redaction amendments. By contrast, we find that reviewers with prior corporate affiliations spend less time on their reviews and request fewer redaction amendments. Together, these results provide insights into how staff characteristics affect review outcomes in balancing the seemingly contradictory objectives of SEC disclosure regulations. Finally, we find that amendments ordered by more experienced staff are more likely to reveal material information, while those ordered by reviewers with prior corporate affiliations result in less proprietary harm.

Through our study design, we are also able to identify how the SEC implements regulations that affect different interested parties through individual reviewer discretion. Our paper's unique angle offers an understanding of how competing objectives in disclosure regulations are managed by the regulatory agency. As the first paper to study the role of discretion in shaping the decisions

of SEC administrators at the Division of Corporation Finance, our evidence helps investors, stakeholders, public administrators, and policymakers understand the administrative process of the SEC and the economic consequences of its review outcomes.

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Appendix I. Examples of CT Orders
Example 1: Approved

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

August 15, 2008

ORDER GRANTING CONFIDENTIAL TREATMENT
UNDER THE SECURITIES EXCHANGE ACT OF 1934

AboveNet, Inc.

File No. 0-23269 - CF#22114

AboveNet, Inc. submitted an application under Rule 24b-2 requesting confidential treatment for information it excluded from the Exhibits to a Form 10-K filed on May 13, 2008.

Based on representations by AboveNet, Inc. that this information qualifies as confidential commercial or financial information under the Freedom of Information Act, 5 U.S.C. 552(b)(4), the Division of Corporation Finance has determined not to publicly disclose it. Accordingly, excluded information from the following exhibit(s) will not be released to the public for the time period(s) specified:

Exhibit 10.5	through May 13, 2018
Exhibit 10.6	through May 13, 2018

For the Commission, by the Division of Corporation Finance, pursuant to delegated authority:

Kathleen Krebs
Special Counsel

Initial Filing Date: May 13, 2008
Filing Date: August 15, 2008

Example 2: Denied

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
13 December 2013

ORDER DENYING CONFIDENTIAL TREATMENT
REQUEST UNDER RULE 24b-2
AND
NOTICE OF OPPORTUNITY TO PETITION
FOR REVIEW UNDER THE
SECURITIES EXCHANGE ACT OF 1934

L & L Energy, Inc.

File No. 1-34633 -- CF# 30116

The Division of Corporation Finance denied your request for confidential treatment of the information excluded from exhibit 4 to exhibit 99.1 to the Form 8-K/A filed on August 14, 2012, amending the Form 8-K filed on August 10, 2012.

We denied your request because we concluded:

- the excluded information is material to those who make investment decisions concerning your securities; and
- the application failed to include information required to be included by Rule 24b-2, including an analysis of the applicable exemption from disclosure under the Commission's rules and regulations.

If you wish to petition the Commission under 17 C.F.R. 201.430 for review of this order, you must file with the Office of the Secretary (1) a written notice of intention to petition for review within five days after you received this order or otherwise have actual notice of it, and (2) a written petition for review, as described in 17 C.F.R. 201.430(a)(2), within five days thereafter.

For the Commission, by the Division of Corporation Finance, pursuant to delegated authority:

Elizabeth M. Murphy
Secretary

Initial Filing Date: August 10, 2012
Filing Date: December 13, 2013

Example 3: Approved after Amendment

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

August 27, 2009

ORDER GRANTING CONFIDENTIAL TREATMENT
UNDER THE SECURITIES EXCHANGE ACT OF 1934

Dyax Corp.

File No. 0-24537 - CF#23538

Dyax Corp. submitted an application under Rule 24b-2 requesting confidential treatment for information it excluded from Exhibit 10.1 to Form 10-Q filed on May 7, 2009, as amended by reduced redactions from the same contract filed as Exhibit 10.1 to Form 10-Q/A filed on August 18, 2009.

Based on representations by Dyax Corp. that this information qualifies as confidential commercial or financial information under the Freedom of Information Act, 5 U.S.C. 552(b)(4), the Division of Corporation Finance has determined not to publicly disclose it. Accordingly, excluded information from the following exhibit(s) will not be released to the public for the time period(s) specified:

Exhibit 10.1 through August 21, 2017

For the Commission, by the Division of Corporation Finance, pursuant to delegated authority:

Christian Windsor
Special Counsel

Initial Filing Date: May 7, 2009
Filing Date: August 27, 2009
Re-filing Date: August 18, 2009

Appendix II. Variable Definitions

Variable	Definition
Amend	A binary variable that equals 1 if the CT order is denied or amended
#Week	A count variable that equals the days from the initial filing date to the CTO filing date, divided by 7 and rounded to the nearest integer
CTO_View	The ratio of the number of EDGAR requests for CTO forms on and the day after the CTO filing date to the number of EDGAR requests for all forms during the one-month period ending five days before the CTO filing date
Rival CAR [0, 1]	The cumulative abnormal stock return on the day and the day following the re-filing date of previously redacted exhibits to the applicant firm's rivals. Day 0 indicates the re-filing date of previously redacted exhibits. The abnormal stock return is computed based on the Event Study by WRDS, using the market model with an estimation window of (-250, -60) days prior to the re-filing date. We require a minimum of 60 observations to perform the estimation
WithinAD	A binary variable that equals 1 if the reviewer is specialized in the firm's AD office. A reviewer is considered to specialize in an AD office if most CTOs reviewed from 2008 to the year tested are from the same AD office
Expert	A binary variable that equals 1 if the reviewer is an industry expert. A reviewer is defined as an industry expert if, compared with other reviewers, she reviews the largest number of CTOs in the two-digit SIC industry from 2008 to the year tested
Manager	A binary variable that equals 1 if the reviewer holds the position of Chief of Office or Associated Director of the Office
Experienced	A binary variable that equals 1 if *WithinAD* and *Expert* equal 1 or if *Manage* equals 1
Company Practice (Director)	The logarithm of the number of years spent by a director of the division of corporation finance on representing or advising companies on corporate practices, such as tax avoidance, mergers and acquisitions, and financing, before joining the SEC
Company Practice (Reviewer)	The logarithm of the number of years spent by a reviewer on industrial work experience related to representing or advising companies on corporate practices, such as tax avoidance, mergers and acquisitions, and financing, before joining the SEC
ComPractice	A binary variable that equals 1 if either *Company Practice (Director)* or *Company Practice (Reviewer)* is above the sample median
Female	A binary variable that equals 1 if the reviewer is female
Age	The logarithm of the reviewer's age
MBA	A binary variable that equals 1 if the reviewer holds an MBA
Num. Exhibit	The logarithm of the number of exhibits applied in the CTO
Redaction Horizon	The maximum duration of excluding disclosure in the CTO
Small Profit	A binary variable that equals 1 if earnings before extraordinary items scaled by total assets is between 0 and 0.1.
Big 4	A binary variable that equals 1 for Big 4 audit firms
%Competition	The Li et al. (2013) measure for a firm's self-disclosed competition
Discretionary Accrual	The performance-matched discretionary accruals
ExFinancing	A binary variable that equals 1 if either the change of equity or long-term debt scaled by total assets is larger than 0.05
Firm Size	The logarithm of total assets in the most recent year
High Timeliness	A binary variable that equals 1 if the disclosure timeliness based on analyst forecasts (Donelson et al. 2012) falls in the highest quartile of the sample distribution.
Institutional Ownership	The percentage of outstanding shares held by institutional investors
Irregularity Restate	A binary variable that equals 1 if the firm was charged with fraud or investigated by the SEC in the two years prior to the CTO application
R&D	The R&D expenditure scaled by total assets in the most recent year
ROA	The operating income before depreciation scaled by total assets in the most recent year

Figure 1. Flow Chat of the SEC's Confidential Treatment Order Decisions

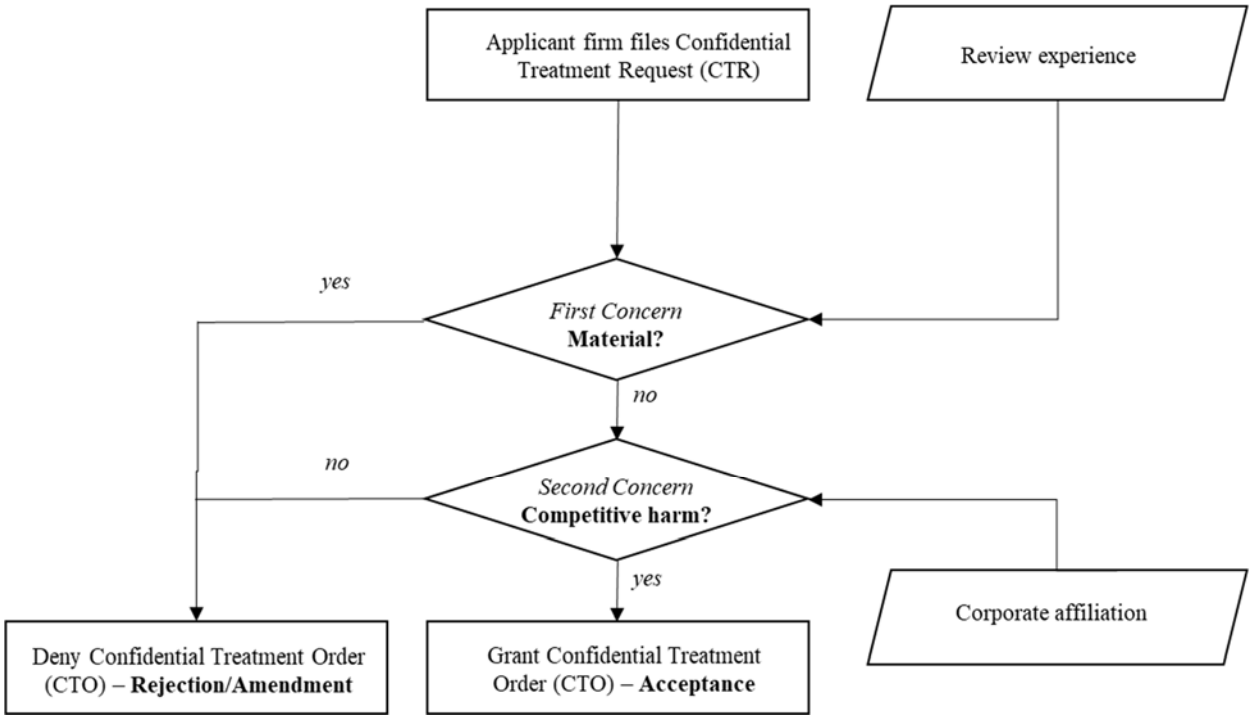

Figure 2. Plot of the Z-statistics of the Interaction Effects

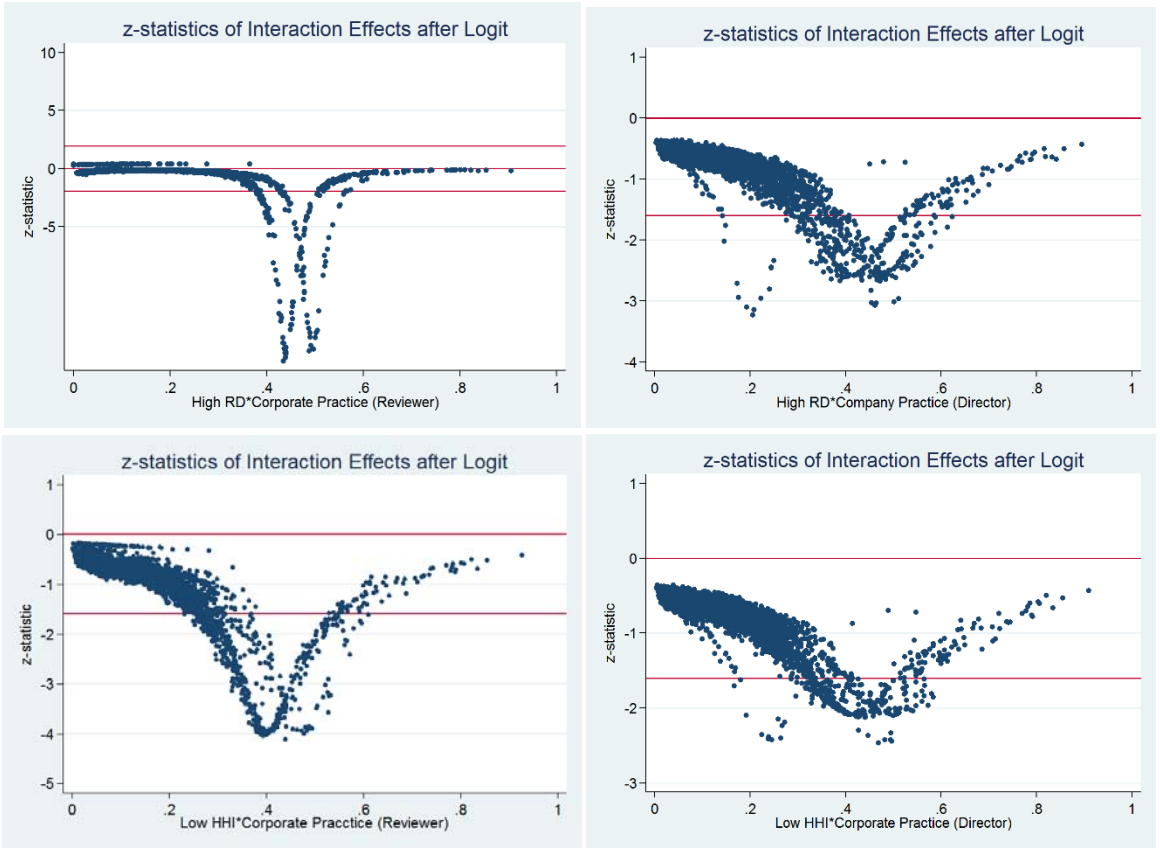

Table 1. Sample Selection

This table shows the sample selection process, the distribution of CTOs, and the number of unique applicant firms (in parentheses) across years.

	2008	2009	2010	2011	2012	2013	2014	2015	Total
All CTO 2008-2015	1095	1494	1592	1429	1488	1329	1343	1287	11057
	(718)	(926)	(916)	(850)	(870)	(829)	(870)	(815)	(6794)
(-) Application for extension of prior granted CTO	919	1208	1234	1106	1130	1062	1082	1007	8748
	(507)	(651)	(684)	(626)	(621)	(618)	(652)	(579)	(4938)
(-) Financial firms	867	1126	1128	1028	1014	962	993	937	8055
	(451)	(591)	(628)	(578)	(559)	(563)	(599)	(538)	(4507)
(-) Invalid firm information	598	810	825	752	704	666	659	643	5657
	(398)	(538)	(549)	(495)	(465)	(439)	(458)	(445)	(3787)
(-) Invalid reviewer information	351	545	652	640	621	627	659	643	4738
	(247)	(398)	(457)	(442)	(413)	(421)	(458)	(445)	(3281)

Table 2. Descriptive Statistics of CTO Review Duration/Outcomes

This table presents the descriptive statistics for our sample. Panel A shows the distribution of the sample for different form types, across years. Panel B shows the proportion of CTOs associated with a certain type of contract, as indicated on the top of the table. Panel C shows the distribution of CTO review characteristics across years. Panel D shows the distribution of CTO review characteristics across the SEC's AD offices. Panel E shows the distribution of reviewer characteristics across the SEC's AD offices. The definitions of the variables are available in Appendix II.

Panel A: Form Types

	10-K	10-Q	8-K	Registration	13D	Others
2008	24.12%	58.29%	16.22%	0.50%	0.67%	0.33%
2009	29.01%	50.86%	18.27%	1.11%	0.12%	0.62%
2010	26.42%	53.33%	19.39%	0.48%	0.12%	0.24%
2011	23.94%	53.86%	20.35%	1.33%	0.00%	0.66%
2012	24.72%	55.54%	18.04%	1.14%	0.28%	0.28%
2013	26.28%	53.90%	19.37%	0.15%	0.15%	0.15%
2014	27.62%	53.72%	16.24%	1.97%	0.30%	0.15%
2015	26.13%	54.74%	16.64%	1.40%	0.93%	0.16%
Total	26.10%	54.12%	18.17%	1.01%	0.30%	0.34%

Panel B: Type of Contracts

Year	Sale /Purchase	License /Royalty	Research /Consulting	Peer	Credit /Lease	Employment	Stockholder	Settlement
2008	0.564	0.387	0.071	0.078	0.065	0.076	0.064	0.035
2009	0.579	0.369	0.106	0.075	0.095	0.072	0.046	0.022
2010	0.558	0.346	0.082	0.071	0.153	0.062	0.066	0.018
2011	0.574	0.359	0.084	0.075	0.123	0.036	0.074	0.032
2012	0.538	0.424	0.101	0.065	0.102	0.059	0.089	0.031
2013	0.674	0.317	0.069	0.060	0.084	0.028	0.060	0.018
2014	0.612	0.357	0.066	0.077	0.088	0.034	0.066	0.018
2015	0.611	0.377	0.129	0.090	0.082	0.034	0.049	0.019
Total	0.592	0.365	0.089	0.074	0.101	0.048	0.064	0.024

Panel C: SEC Review Duration/Outcome across Years

Year	Obs.	% Obs. to Total	Amend	Mean Review Weeks
2008	351	7.41%	4.56%	19.58
2009	545	11.50%	10.83%	12.71
2010	652	13.76%	17.02%	10.62
2011	640	13.51%	21.09%	11.77
2012	621	13.11%	16.10%	10.09
2013	627	13.23%	16.59%	10.20
2014	659	13.91%	16.08%	9.61
2015	643	13.57%	9.80%	9.90
Total	4738	100.00%	14.65%	11.32

Panel D: SEC Review Duration/Outcomes across AD Offices

AD Office	AD Office Title	Applications	Amend	Mean Review Weeks
1	Healthcare and Insurance	1245	9.00%	9.46
2	Consumer Products	445	13.48%	9.56
3	Information Technologies and Services	452	16.37%	15.35
4	Natural Resources	107	23.36%	12.10
5	Transportation and Leisure	539	14.10%	12.40
6	Manufacturing and Construction	320	8.75%	11.00
8	Real Estate and Commodities	40	2.50%	13.13
9	Beverages, Apparel, and Mining	380	22.37%	9.83
10	Electronics and Machinery	719	20.58%	12.83
11	Telecommunications	491	17.31%	12.71
Total		4738	14.65%	11.44

Panel E: Reviewer Characteristics across AD Offices

AD Office	#Reviews	WithinAD	Expert	Manager	Company Practice (Director)	Company Practice (Reviewer)	Female	Age	MBA
1	30	0.836	0.432	0.019	2.813	0.043	0.432	3.701	0.218
2	17	0.443	0.654	0.054	2.744	0.160	0.681	3.788	0.090
3	15	0.642	0.723	0.040	2.760	0.409	0.595	3.706	0.091
4	6	0.000	0.860	0.028	3.041	0.000	0.439	3.724	0.187
5	20	0.571	0.759	0.019	2.754	0.007	0.596	3.663	0.089
6	10	0.597	0.650	0.006	2.711	0.000	0.125	3.713	0.088
8	6	0.225	0.750	0.025	2.689	0.520	0.575	3.702	0.025
9	21	0.326	0.632	0.042	2.742	0.014	0.618	3.673	0.103
10	22	0.406	0.531	0.013	2.681	0.084	0.271	3.680	0.120
11	13	0.676	0.695	0.004	2.681	0.005	0.780	3.499	0.081
Total	33	0.588	0.603	0.023	2.752	0.085	0.497	3.680	0.130

Table 3. Summary Statistics

This table summarizes the statistics of the main variables in our tests. We categorize the variables into application, firm, and reviewer characteristics. The definitions of the variables are available in Appendix II.

	N	Mean	STD	P10	P25	P50	P75	P90
Application Characteristics:								
Amend	4738	0.146	0.354	0.000	0.000	0.000	0.000	1.000
#Week	4738	11.32	13.950	3.000	4.000	7.000	13.000	22.000
Num. Exhibits	4738	0.911	0.349	0.693	0.693	0.693	1.099	1.386
Redact Horizon	4738	7.365	0.751	6.256	6.948	7.501	8.112	8.203
Reviewer Characteristics:								
WithinAD	4738	0.588	0.492	0.000	0.000	1.000	1.000	1.000
Expert	4738	0.603	0.489	0.000	0.000	1.000	1.000	1.000
Manager	4738	0.023	0.150	0.000	0.000	0.000	0.000	0.000
Company Practice (Director)	4738	2.752	0.644	2.485	2.485	2.485	3.258	3.258
Company Practice (Reviewer)	4738	0.085	0.430	0.000	0.000	0.000	0.000	0.000
Female	4738	0.497	0.500	0.000	0.000	0.000	1.000	1.000
Age	4738	3.680	0.178	3.466	3.555	3.664	3.761	3.951
MBA	4738	0.130	0.336	0.000	0.000	0.000	0.000	1.000
Firm Characteristics:								
%Competition	4738	0.879	0.391	0.413	0.592	0.840	1.112	1.399
R&D	4738	0.153	0.259	0.000	0.000	0.056	0.191	0.418
Firm Size	4738	5.724	2.217	2.946	4.238	5.655	7.227	8.699
ROA	4738	-0.139	0.570	-0.607	-0.228	0.054	0.130	0.199
Small Profit	4738	0.344	0.475	0.000	0.000	0.000	1.000	1.000
Discretionary Accrual	4738	0.334	0.808	0.016	0.042	0.114	0.289	0.629
Irregularity Restate	4738	0.012	0.109	0.000	0.000	0.000	0.000	0.000
Big 4	4738	0.725	0.447	0.000	0.000	1.000	1.000	1.000
ExFinancing	4738	0.552	0.497	0.000	0.000	1.000	1.000	1.000
Institutional Ownership	4738	0.425	0.370	0.000	0.000	0.411	0.775	0.922
High Timeliness	4738	0.191	0.393	0.000	0.000	0.000	0.000	1.000

Table 4. Correlation Table

This table presents the Pearson (below the diagonal) and Spearman (above the diagonal) correlations between the main variables. Bold text indicates a significance level of 10%.

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1)	Amend		0.02	**0.05**	**0.06**	**-0.07**	**-0.05**	**-0.04**	**-0.05**	**0.04**	**-0.04**	**0.03**	**-0.05**
(2)	WithinAD	0.02		0.02	-0.01	**-0.32**	**0.03**	0.02	**0.12**	**0.07**	0.01	0.00	**0.04**
(3)	Expert	**0.05**	0.02		**-0.15**	**0.24**	**-0.07**	**-0.04**	**-0.20**	**-0.08**	-0.02	0.02	0.00
(4)	Manager	**0.06**	-0.01	**-0.15**		**-0.09**	**-0.03**	-0.02	**-0.03**	-0.02	0.01	-0.02	0.00
(5)	Company Practice (Director)	**-0.04**	**-0.22**	**0.18**	**-0.07**		**0.13**	**0.03**	0.02	**-0.05**	-0.01	**0.15**	**-0.06**
(6)	Company Practice (Reviewer)	**-0.05**	**0.03**	**-0.05**	**-0.03**	**0.07**		**0.07**	**0.03**	**-0.05**	**0.03**	**-0.06**	**0.04**
(7)	%Competition	**-0.03**	0.02	**-0.03**	-0.01	**0.03**	**0.06**		**0.18**	**0.04**	**-0.06**	-0.02	0.00
(8)	R&D	**-0.03**	**0.08**	**-0.15**	**-0.03**	-0.01	**-0.03**	**0.06**		**0.26**	**-0.07**	**0.26**	**-0.13**
(9)	Discretionary Accrual	**0.04**	**0.03**	-0.01	**-0.03**	**0.03**	**-0.03**	-0.01	**0.25**		**-0.22**	**0.11**	**-0.18**
(10)	Big 4	**-0.04**	0.01	-0.02	0.01	0.00	**0.03**	**-0.05**	**-0.12**	**-0.24**		**-0.05**	**0.32**
(11)	ExFinancing	**0.03**	0.00	0.02	-0.02	**0.14**	**-0.06**	**-0.03**	**0.24**	**0.10**	**-0.05**		**-0.12**
(12)	Institutional Ownership	**-0.05**	**0.05**	0.00	0.00	**-0.05**	**0.04**	-0.01	**-0.20**	**-0.20**	**0.36**	**-0.11**	

Table 5. Significance of Reviewer Fixed Effects

This table presents the results for the significance of reviewer fixed effects. Panel A reports the results for reviewer fixed effects compared with those for industry-year fixed effects. Panel B presents the results for the persistence of reviewer fixed effects/style. In Panel A, the dependent variable is *Amend*. The sample period is from 2012 to 2015. *Reviewer Fixed Effect* (2008-2011) is the fixed effect of reviewers estimated using the logistic regression relating *Amend* to CTO controls, firm controls, and a set of reviewer dummies based on the 2008-2011 sample period. Column (1) controls for industry*year fixed effects, column (2) controls for reviewer fixed effects, and column (3) controls for industry*year and reviewer fixed effects. All columns show the results of model (1) with CTO and firm controls. In Panel B, the dependent variable is *Amend*. The results in all columns are based on a sample requiring an industry-year cohort to have more than two observations. The definitions of the variables are available in Appendix II. All continuous variables are winsorized at the 1% and 99% levels. Standard errors are clustered at the firm level and displayed in parentheses. *, **, and *** indicate significance levels of 10%, 5%, and 1%, respectively.

Panel A Explanation Power of Reviewer Fixed Effects

	Industry*Year (1)	Reviewer (2)	Industry*Year + Review (3)
F Stat for SEC Reviewer FE	-	177.74	67.57
P-value	-	<0.001	<0.001
McFadden's Adj. R-square	0.021	0.048	0.029
AIC*n	3841.375	3673.012	3812.807
Akaike Adjusted Vuong test:			
(2) vs. (1), Z- statistics (P-value)		5.597 (<0.001)	
(3) vs. (1), Z-statistics (P-value)			1.901 (0.057)
CTO Controls	Yes	Yes	Yes
Firm Controls	Yes	Yes	Yes
Form Type FE	Yes	Yes	Yes
Observations	4,738	4,738	4,738
Pseudo R-square	0.111	0.075	0.130

Panel B Persistence of Reviewer Fixed Effects

	CTO (2012-2015)	
	Amend	Amend
	(1)	(2)
Reviewer Fixed Effect (2008-2011)	0.368***	0.333**
	(0.099)	(0.155)
Firm and CTO Controls	No	Yes
Industry*Year FE	No	Yes
Form Type FE	No	Yes
Observations	2,550	2,550
Pseudo R-square	0.007	0.159

Table 6. Determinants of CTO Review Outcomes

This table shows the results for the determinants of review outcomes. The dependent variable is *Amend*. The model is estimated using logit regression. All of the columns report results controlling for form-type and industry-year effects. The definitions of the variables are available in Appendix II. All continuous variables are winsorized at the 1% and 99% levels. Standard errors are clustered at the firm level and displayed in parentheses. *, **, and *** indicate significance levels of 10%, 5%, and 1%, respectively.

	Amend		
	(1)	(2)	(3)
Reviewer Experience:			
WithinAD	0.445***		0.457***
	(0.143)		(0.147)
Expert	0.329***		0.342***
	(0.119)		(0.120)
Manager	0.903***		0.991***
	(0.308)		(0.313)
Reviewer Affiliation:			
Company Practice (Reviewer)	-0.472***		-0.466**
	(0.183)		(0.187)
Company Practice (Director)	-0.217*		-0.218**
	(0.112)		(0.110)
Reviewer Controls:			
Female	-0.073		-0.115
	(0.154)		(0.154)
Age	0.377		0.278
	(0.563)		(0.565)
MBA	-0.295		-0.332
	(0.263)		(0.268)
Application Controls:			
Num. Exhibits		0.540***	0.553***
		(0.132)	(0.132)
Redact Horizon		0.215***	0.211***
		(0.070)	(0.069)
Firm Controls:			
%Competition		-0.142	-0.114
		(0.125)	(0.125)
R&D		-0.436	-0.405
		(0.271)	(0.277)
Firm Size		-0.125***	-0.129***
		(0.037)	(0.037)
ROA		-0.035	-0.010
		(0.125)	(0.128)
Small Profit		-0.054	-0.073
		(0.122)	(0.122)
Discretionary Accrual		0.082	0.088

		(0.055)	(0.054)
Irregularity Restate		0.220	0.224
		(0.353)	(0.360)
Big 4		0.086	0.094
		(0.125)	(0.126)
ExFinancing		0.246**	0.269**
		(0.108)	(0.108)
Institutional Ownership		0.033	0.014
		(0.153)	(0.151)
High Timeliness		0.084	0.092
		(0.113)	(0.113)
Industry*Year FE	Yes	Yes	Yes
Form Type FE	Yes	Yes	Yes
Observations	4,738	4,738	4,738
Pseudo R-square	0.168	0.175	0.186

Table 7. Interaction Effect of Proprietary Costs

This table presents results for the effect of reviewers' prior corporate affiliations for different levels of the proprietary costs of disclosure. The dependent variable is *Amend*. The model is estimated using logit regression. All of the columns report results controlling for form-type and industry-year effects. *HighRD* is a binary variable that equals 1 if the average ratio of R&D expenditure to total assets in the industry is higher than the sample median in that year, and 0 otherwise. *LowHHI* is a binary variable that equals 1 if the HHI of the industry is lower than the sample median in that year, and 0 otherwise. The definitions of the variable are available in Appendix II. All continuous variables are winsorized at the 1% and 99% levels. Standard errors are clustered at the firm level and displayed in parentheses. *, **, and *** indicate significance levels of 10%, 5%, and 1%, respectively.

	Amend	
	(1)	(2)
Reviewer Affiliation:		
HighRD * Company Practice (Reviewer)	-12.103***	
	(0.529)	
HighRD * Company Practice (Director)	-0.433**	
	(0.216)	
LowHHI * Company Practice (Reviewer)		-0.743*
		(0.383)
LowHHI * Company Practice (Director)		-0.356*
		(0.212)
Company Practice (Reviewer)	-0.079	-0.180
	(0.217)	(0.222)
Company Practice (Director)	0.030	-0.059
	(0.172)	(0.158)
HighRD	1.671**	
	(0.719)	
LowHHI		1.544**
		(0.670)
Reviewer Affiliation:		
WithinAD	0.451***	0.454***
	(0.148)	(0.149)
Expert	0.308**	0.321***
	(0.120)	(0.121)
Manager	0.969***	0.964***
	(0.316)	(0.313)
Controls	Yes	Yes
Industry*Year FE	Yes	Yes
Form Type FE	Yes	Yes
Observations	4,738	4,738
Pseudo R-square	0.190	0.188

Table 8. Robustness Checks of the Determinants of Review Outcomes

This table presents the results for the robustness tests with firm fixed effects and a limited sample of CTOs associated with 10-Q and 10-K filings. The dependent variable is *Amend*. The model is estimated using the Linear Probability Model in columns (1) to (3), and using Logit regression in columns (4) to (6). Columns (1) to (3) report results controlling for form-type, industry-year fixed effects, and firm fixed effects. Columns (4) to (6) report results controlling for form-type and industry-year fixed effects. The definitions of the variables are available in Appendix II. All continuous variables are winsorized at the 1% and 99% levels. Standard errors are clustered at the firm level and displayed in parentheses. *, **, and *** indicate significance levels of 10%, 5%, and 1%, respectively.

	Amend					
	Firm FE			10K/10Q		
	(1)	(2)	(3)	(4)	(5)	(6)
Reviewer Capability:						
WithinAD	0.057***		0.055***	0.461***		0.490***
	(0.018)		(0.018)	(0.168)		(0.174)
Expert	0.056***		0.053***	0.310**		0.315**
	(0.018)		(0.018)	(0.135)		(0.137)
Manager	0.068		0.067	0.993***		1.121***
	(0.055)		(0.057)	(0.366)		(0.373)
Reviewer Affiliation:						
Company Practice (Reviewer)	-0.057***		-0.058***	-0.516**		-0.532**
	(0.019)		(0.018)	(0.209)		(0.217)
Company Practice (Director)	-0.027*		-0.025*	-0.271**		-0.246*
	(0.014)		(0.013)	(0.136)		(0.133)
Reviewer Controls:						
Female	-0.028		-0.033	-0.027		-0.092
	(0.021)		(0.020)	(0.176)		(0.176)
Age	0.079		0.076	0.618		0.549
	(0.074)		(0.073)	(0.639)		(0.648)
MBA	-0.065**		-0.065**	-0.364		-0.422
	(0.026)		(0.026)	(0.306)		(0.312)
Application Controls:						
Num. Exhibits		0.066***	0.064***		0.650***	0.679***
		(0.021)	(0.021)		(0.144)	(0.146)
Redact Horizon		0.026**	0.028**		0.211***	0.207***
		(0.011)	(0.011)		(0.079)	(0.078)
Firm Controls:						
%Competition		-0.008	-0.002		0.018	0.047
		(0.030)	(0.030)		(0.142)	(0.143)
R&D		-0.055	-0.042		-0.852**	-0.860**
		(0.060)	(0.059)		(0.368)	(0.389)
Firm Size		-0.016	-0.016		-0.157***	-0.162***
		(0.020)	(0.020)		(0.044)	(0.044)
ROA		0.040	0.047		-0.123	-0.113

		(0.038)	(0.037)		(0.157)	(0.170)
Small Profit		-0.014	-0.018		-0.102	-0.130
		(0.021)	(0.022)		(0.136)	(0.137)
Discretionary Accrual		0.010	0.009		0.005	0.003
		(0.015)	(0.015)		(0.073)	(0.074)
Irregularity Restate		0.004	0.008		0.084	0.085
		(0.065)	(0.062)		(0.442)	(0.437)
Big 4		-0.085*	-0.077		0.194	0.196
		(0.051)	(0.049)		(0.151)	(0.153)
ExFinancing		0.030*	0.029*		0.288**	0.302**
		(0.018)	(0.018)		(0.124)	(0.124)
Institutional Ownership		0.022	0.014		0.219	0.209
		(0.053)	(0.053)		(0.167)	(0.164)
High Timeliness		0.028*	0.028*		0.201	0.215*
		(0.016)	(0.016)		(0.129)	(0.127)
Industry*Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Form Type FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	No	No	No
Observations	4,738	4,738	4,738	3,798	3,798	3,798
Pseudo/Adjusted R-square	0.107	0.107	0.116	0.183	0.191	0.204

Table 9. Exogenous Allocations

This table presents the results for the determinants of review outcomes with a sample in which the allocation of confidential treatment reviews is exogenous. We focus on a sample of CTOs satisfying the following conditions: 1) the corresponding AD office has only one SEC staff receiving CTRs in the year-month, 2) there are more than two CTOs in the corresponding AD office in the year-month. The dependent variable is *Amend*. Column (1) uses all CTOs satisfying the above conditions; column (2) excludes CTOs associated with form types other than 10-K and 10-Q. All of the columns report results controlling for the content of the exhibits, form-type, and industry-year fixed effects. The definition of the variables is available in Appendix II. All continuous variables are winsorized at the 1% and 99% levels. Standard errors are clustered at the firm level and displayed in parentheses. *, **, and *** indicate significance levels of 10%, 5%, and 1%, respectively.

	Amend	
	(1)	(2)
Reviewer Capability:		
WithinAD	3.135***	3.888***
	(0.925)	(1.076)
Expert	4.600**	14.458
	(2.105)	(9.082)
Reviewer Affiliation:		
Company Practice (Reviewer)	-4.418**	-6.343***
	(1.943)	(2.198)
Company Practice (Director)	-11.788***	-12.528*
	(1.786)	(6.824)
Reviewer Controls:		
Female	0.318	-8.208
	(1.265)	(7.505)
Age	-18.993**	-66.123
	(8.689)	(40.449)
MBA	-12.329**	-44.552
	(5.813)	(27.940)
Application Controls:		
Num. Exhibits	0.640*	0.667*
	(0.355)	(0.392)
Redact Horizon	0.377**	0.519**
	(0.181)	(0.216)
Firm Controls:		
%Competition	-0.548*	-0.238
	(0.313)	(0.391)
R&D	-0.231	-0.958
	(0.626)	(1.028)
Firm Size	-0.063	-0.130
	(0.083)	(0.098)
ROA	-0.102	0.067
	(0.247)	(0.328)
Small Profit	-0.604**	-0.634*
	(0.294)	(0.331)

Discretionary Accrual	-0.018	0.044
	(0.104)	(0.128)
Irregularity Restate	2.386*	-0.030
	(1.230)	(0.949)
Big 4	0.133	0.261
	(0.308)	(0.395)
ExFinancing	0.321	0.279
	(0.219)	(0.257)
Institutional Ownership	-0.352	0.055
	(0.374)	(0.411)
High Timeliness	-0.189	0.081
	(0.278)	(0.306)
Industry*Year FE	Yes	Yes
Form Type FE	Yes	Yes
Observations	1,309	1,041
Pseudo R-square	0.343	0.359

Table 10. Determinants of CTO Review Duration

This table presents the results for the determinants of review duration. The sample consists of all CTOs initiated after 2008. The dependent variable is *#Weeks*. The model is estimated using negative binomial regression in columns (1) and (3), and using OLS regression in column (2). All of the columns report results controlling for form-type and industry-year fixed effects. The definition of the variables is available in Appendix II. All continuous variables are winsorized at the 1% and 99% levels. Standard errors are clustered at the firm level and displayed in parentheses. *, **, and *** indicate significance levels of 10%, 5%, and 1%, respectively.

	#Weeks		
	Whole Sample	Firm FE	10-K, 10-Q
	(1)	(2)	(3)
Reviewer Capability:			
WithinAD	0.181***	1.893***	0.194***
	(0.041)	(0.520)	(0.047)
Expert	0.167***	1.883***	0.164***
	(0.037)	(0.497)	(0.042)
Manager	0.230**	1.490	0.313***
	(0.098)	(1.587)	(0.110)
Reviewer Affiliation:			
Company Practice (Reviewer)	-0.227***	-2.779***	-0.250***
	(0.039)	(0.672)	(0.044)
Company Practice (Director)	-0.160**	-2.189***	-0.207**
	(0.075)	(0.709)	(0.091)
Reviewer Controls:			
Female	0.083*	0.614	0.123**
	(0.049)	(0.599)	(0.054)
Age	0.432***	3.095*	0.443**
	(0.156)	(1.867)	(0.177)
MBA	-0.071	-0.802	-0.071
	(0.069)	(0.725)	(0.079)
Application Controls:			
Num. Exhibits	0.272***	2.974***	0.289***
	(0.036)	(0.596)	(0.039)
Redact Horizon	0.024	0.351	0.016
	(0.020)	(0.325)	(0.023)
Firm Controls:			
%Competition	0.027	-0.228	0.050
	(0.040)	(0.941)	(0.044)
R&D	-0.266***	-1.671	-0.349***
	(0.082)	(1.828)	(0.096)
Firm Size	-0.015	-1.332**	-0.021
	(0.012)	(0.662)	(0.013)
ROA	-0.067*	-0.059	-0.089**
	(0.037)	(1.068)	(0.043)
Small Profit	0.013	0.285	0.011
	(0.033)	(0.584)	(0.036)
Discretionary Accrual	0.005	0.183	-0.000
	(0.017)	(0.400)	(0.021)
Irregularity Restate	0.021	-0.761	-0.034

	(0.128)	(2.051)	(0.148)
Big 4	-0.069*	0.081	-0.030
	(0.041)	(1.600)	(0.048)
ExFinancing	-0.064**	-0.759	-0.051
	(0.031)	(0.520)	(0.034)
Institutional Ownership	0.001	-2.207	-0.017
	(0.045)	(1.593)	(0.050)
High Timeliness	-0.021	-0.140	-0.007
	(0.035)	(0.512)	(0.039)
Industry*Year FE	Yes	Yes	Yes
Form Type FE	Yes	Yes	Yes
Firm FE	No	Yes	No
Observations	4,262	4,262	3,422
Pseudo/Adjusted R-square	0.042	0.196	0.047

Table 11. EDGAR Requests for CTO Forms

This table presents the results comparing requests for CTOs with and without amendments around the CTO filing date using CTO forms in EDGAR. The dependent variable is *CTO_View,* which is defined as the natural logarithm of 1 plus the ratio of the number of EDGAR requests for CTO forms on and the day after the CTO filing date to the number of EDGAR requests for all forms in the month prior to the CTO filing date. *Experienced* is a binary variable that equals 1 if the reviewer is from the applicant firm's AD office and is either an industry expert or a manager, and 0 otherwise. Column (1) is based on the amended CTO sample; column (2) is based on the granted CTO sample without amendments. All columns control for CTO controls, month, day-of-the-week, and industry*year fixed effects. Standard errors are corrected for heterogeneity and displayed in parentheses. *, **, and *** indicate significance levels of 10%, 5%, and 1%, respectively.

	CTO_View	
	Amend=1	Amend=0
	(1)	(2)
Experienced	0.011***	-0.004*
	(0.004)	(0.002)
F-test (difference)	12.33***	
p-value	(<0.001)	
CTO Controls	Yes	Yes
Month FE	Yes	Yes
Day of week FE	Yes	Yes
Industry*Year FE	Yes	Yes
Observations	694	4,043
Adjusted R-square	0.003	0.050

Table 12. Market Reaction to Industry Rivals around the Re-filing of Exhibits

This table presents the results for the market reaction to the applicant firm's industry rivals around the re-filing of previously redacted information. Industry peers or rivals are determined based on the pairwise product similarity database provided by Hoberg and Phillips (2016). The dependent variable is *Rival CAR [0, 1]*, which uses the cumulative return on the re-filing date and the day after the re-filing date to the applicant firm's rivals. The market reaction is estimated based on the Event Study by WRDS, using the market model with an estimation window of 252 days ending 60 days before the re-filing date, with a minimum of 60 observations for the estimation window. *ComPractice* is a binary variable that equals 1 if either the *Company Practice (Director)* or the *Company Practice (Reviewer)* is higher than its corresponding sample median, and 0 otherwise. *High Similarity* indicates rivals with pairwise product similarity scores higher than the sample median, and *Low Similarity* indicates rivals with pairwise product similarity scores lower than the sample median. *High R&D* indicates industry rivals with an R&D intensity higher than the sample median, and *Low R&D* indicates industry rivals with an R&D intensity lower than the sample median. *Low HHI* indicates industry rivals with an HHI lower than the sample median, and *High HHI* indicates industry rivals with an HHI higher than the sample median. All columns control for CTO controls, form-type fixed effects, and industry-year fixed effects. Standard errors are corrected for heterogeneity and displayed in parentheses. *, **, and *** indicate significance levels of 10%, 5%, and 1%, respectively.

	Rival CAR [0, 1]					
	High Similarity	Low Similarity	High R&D	Low R&D	Low HHI	High HHI
	(1)	(2)	(3)	(4)	(5)	(6)
ComPractice	-0.254*	-0.068	-0.359***	0.088	-0.293**	0.024
	(0.151)	(0.135)	(0.134)	(0.200)	(0.142)	(0.137)
F-test	0.80		3.46*		7.02***	
P-value:	(0.37)		(0.06)		(0.01)	
CTO Controls	Yes	Yes	Yes	Yes	Yes	Yes
Form Types	Yes	Yes	Yes	Yes	Yes	Yes
Industry*Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	27,475	27,563	29,294	25,744	27,279	27,759
Adjusted R-square	0.025	0.010	0.019	0.021	0.019	0.019